continued to develop and perfect his system until his death in 1918. The Munsell Color Company was then formed to carry on his work and the system was improved and developed to the high standard that it has achieved today.

As already mentioned there are quite a number of systems which have been devised with the aim of classifying colour, from that of Athanasius Kirchner in 1617 to that of Alfred Hickethier in 1940. Between these two come some of the better known ones such as Otto Runge, M.E. Chevreul, Wilhelm Ostwald and, of course, Albert H. Munsell himself.

The majority of these systems are based on solid geometrical figures that are collectively known as colour solids. Otto Runge used a sphere to demonstrate his system, whereas Chevreul used a hemisphere. J.H. Lambert used a pyramid and Wilhelm Von Bezold a flat-sided cone. Both Wilhelm Ostwald and Ogden Rood used a double cone and A. Hoffier used both an octahedron and a double tetrahedron, while Charpentier and Alfred Hickethier preferred the cube.

It can be seen from the above just how many systems there are, and much has been written on each of them. Figures 1-3 show the basic shapes of a few of the colour solids that have been devised over the years. Figure 4 shows details of the Munsell colour solid. It can be seen from this that the overall shape is quite irregular and that the extreme peripheral is dictated by the extent to which each of the various hues reaches in terms of chroma. This will become apparent later.

To analyze the Munsell system in detail when it has already been dealt with in depth by others who are specialists in the subject would not serve any useful purpose to the student of interior design, where all the scientific and technical applications are not required. However, to a potential interior designer the system is still very important, and it is necessary to have a good working knowledge of it. You will be almost certain to encounter the Munsell system of colour notation when in practice, especially if having to deal with The American National Standards Institute, The
There are also interesting stained glass and concrete screens that can be designed for impressive areas if they do not need to be lit extensively by natural means. Since the thickness of glass is embedded into plaster or a concrete free-standing frame, it tends to assume a rather more solid appearance.

Antique glass, that has the ‘bull’s eye’ shape and uneven texture of the first window glass ever made, can be introduced into such features if desired. Indeed, techniques have been developed where actual coloured pieces can be fused or stuck onto a large plate glass window, in a random but balanced ‘glass mural’ either framed and free-standing or fixed to a suitable backing on a wall, and again properly lit to show its quality to advantage.

It is very important to understand that working with glass can be quite dangerous so it is important to consider the location of its use as well as the type of glass chosen. In addition, glass work needs to be done by a qualified glazier who understands the qualities of this very special but hazardous material.

Plastics
It is the unusual and synthetic origins of this group of synthetic materials that make this subject so interesting. Always open to further developments, plastics have made a tremendous impact on the appearance and nature of the interior.

They have a number of advantageous properties, counterbalanced by certain problems. For example, they are able to perform some jobs better than any other material, since some of them can repel water and withstand acids, alkalis and heat. Although some do not hold their colour well they can be very strong and durable, capable of being formed into new shapes and forms, and glossy, colourful and exciting finishes, or milky and translucent and subtle textures. Impermeable to water, chemically inert, rot and decay proof, their initial drawbacks appeared to be a harshness of appearance, comparative costliness and a danger of dense toxic fumes in the event of fire. Today, of course, one of the main drawbacks of most plastics is their very indestructibility. Countless millions of tons of plastics are thrown away every year, only to survive virtually indefinitely in landfill sites. Burning them alleviates one problem while exacerbating another - namely the release of yet more highly toxic gases into the atmosphere. Thankfully, however, processes have now been developed whereby plastic can be shredded to a powder and then acted upon by specific microbes that ingest the harmful chemicals and excrete harmless ones. In addition there are now biodegradable plastics.
Step Two
Using Studio Tac or spray glue (be careful using this product as you will have to cope with airborne glue particles), attach the plan and the elevations to white foam core board (easy to use) or corrugated cardboard (more sustainable) and very carefully cut out the elevations with a sharp scalpel or X-Acto/craft knife. There should be an area left around the plan, since this will serve as the base for your study model. See Steps 2.1 and 2.2.

Step Three
Cut out the doors and windows in the elevations and then glue the walls in place on the plan board. Cut a "ceiling" to fit over the entire model (a removable one may be helpful for several studies).

Step Four
Use this simple model to study light and space.

You can use this method to prepare a simple student's presentation model by rendering the plan and elevations, finishing the edges, cutting trenches to insert the walls and mitring the wall joints. Again, there are various ways of presenting models for the student and we encourage you to explore how this might be done as well as the materials that will help you.
Lesson AD10

Lighting

The Importance of Lighting in Interior Design
Lighting is one of the most exciting elements of interior design, and yet one that can still be neglected. Light is still sometimes treated as an appendage that must be added to perform a specific function, rather than as a building material whose unique characteristics demand that it be included in the design from the beginning. One wonders how it is that a profession which embraces so eagerly the aesthetic possibilities offered by new developments in structure and materials has, until relatively recently, largely overlooked the ability of light to create a made-to-order visual atmosphere.

To begin with, of course, there is a basic difficulty in visualizing light. Even if lighting is considered in the initial stages of design, the designer may feel s/he lacks the verbal and graphic vocabulary with which to communicate the pattern of light and shade seen in his or her mind’s eye to the consultant who will finally translate it into equipment.

It is essential for the designer to be familiar with the qualities, functions and characteristics of light and the techniques involved in its use. In this Lesson we will look at these fundamentals and explain how to break down the stages of lighting design into simple steps, and look at the various ways of representing your ideas on paper.

Creating successful lighting design in small commercial installations or most residential installations is clearly within the ability of the interior design professional. However, if highly specialized lighting or lighting for large commercial installations is required, it is important to consult lighting designers or lighting engineers to cover all aspects of the process fully. This does not mean that the professional interior designer will steer clear of larger lighting design projects; but it may well be necessary to work closely with a specialist lighting designer or engineer in order to create a successful and friendly environment.

Light
The old days of the single pendant light in the middle of the room are becoming a distant memory, and today designers look to lighting as one of the most important elements of interior design. Paramount, of course, is the need to provide a practical source of light for visibility, but added to this necessity is the aesthetic role of creating mood, defining form and highlighting the interior decoration. It is pointless to spend large sums on decoration, furniture and fittings if one then fails to provide a level of visibility that allows the client to enjoy these to the full.

Lighting needs to be considered at the earliest possible stage of the design process. The provision of power points, cables, the channelling of walls and the installation of tracking systems all need to be planned before any

Photograph by James Moms.
The Interior Archive
Mood Boards

The mood board is a less formal device than the sample board, and is intended more for your own purposes in developing ideas for a scheme than to show to clients — although mood boards may indeed be helpful in putting over your basic ideas to the client, so don’t rule them out as presentational devices. The mood board can be built up in much the same way as the sample board but in a less structured manner, and its purpose is to give you an initial ‘feel’ for a design you’re considering, or wish to put this across to the client. While less formal than the sample board, it could be said to be a slightly more formal version of ideas you’ve come up with in your sketchbook, helping you to crystallize some half-formed idea into a more coherent whole.

It will often consist of ‘sketchy’ ideas, perhaps illustrations cut out from magazines (colour photocopy, or scan and print out, if you wish to preserve the magazine) to suggest the feel of the interior spaces you’re developing. You should include ideas for furniture, materials and textures, or of complete interiors that give the sort of mood you hope to create. They might be on a particular theme such as “moody blue” or “dynamism”, or the atmosphere you’re looking for in designing for a client, perhaps “modern rustic” for a restaurant development.

Note on cutting mat boards by hand: It’s important to use clean, sharp mat knives to give a clean cut on the mat. You may also wish to experiment with making the cut at a slight angle to give a nice finish. Safety is of paramount importance when using these knives. They’re extremely sharp and can cut deeply into human flesh with one swift motion. Always take special care when using these knives and always make sure that they’re kept out of the reach of anyone who could possibly do harm to themselves. One of the safest things to do is to use several passes with the mat knife to achieve the cut, rather than attempting to cut the entire depth in one swipe.
Lesson M4
Synthetic, or Processed Materials

Why, when the world is full of natural materials, are the bulk of our building and decorative requirements subject to so much processing? Through often elaborate and painfully toilsome labours, we are striving to help ourselves further improve on nature or make the best use of diminishing resources.

Processed Materials
Many natural materials are available for our use in the design and construction industry but which cannot be put to use without some prior processing. Processing may include adding materials together to provide additional strength, mixing both synthetic and natural materials for different characteristics, or mixing the natural material with water and applying heat or air to foster a drying process. Processed materials have been used for centuries, and we see early examples in the mixtures of soil, straw and water used to make ancient housing structures the world over. The mixing of materials greatly increases our resources, the products available, and the options we have for using materials that are found geographically close to our new structures.

The processed materials we will survey in this Unit will include several masonry materials such as tile, brick, and concrete; some metal blends such as aluminium and chrome; glass; and plasters. Many of the materials mentioned are often considered to be strictly for exterior construction, but can be used quite creatively and successfully in interiors if the designer is informed and
Relief Coverings

Anaglypta is made from good quality rag. The usual embossed pattern is formed while the pulp is damp, and high relief designs can be supplied in hollow-backed panels. Normally primed with acrylic undercoat and finished with an oil paint or a thin coat of emulsion applied before the emulsion finishing coat, handled properly this could prove a worthwhile product to use for an appropriate reason.

Embossed Wallpaper has a raised surface caused by pressing the paper through two oppositely-indented rollers that can be adjusted in textural depth. Care must be taken to protect the quality of the chosen finish. Sometimes printing and embossing combined are used to produce a canvas effect.

The subject of wallcoverings is an area of interior design that is constantly changing, and you should endeavour to keep up with new products. You will find that some papers such as leatherette and satin paper are now difficult if not almost impossible to get hold of, having been superseded by more convenient products; but it is worth knowing about the range of materials at your disposal should you wish to specify a particular effect for a special interior, in which case you will probably have to venture further afield than your usual supplier and investigate smaller suppliers that specialize in traditional finishes and techniques.
Lesson M9
Soft Furnishings - Fabrics

There are several ways of producing textiles from fibres and yarns, whether by hand or mechanized. Weaving is the most usual for fabrics in general, so it is important to realize that most of the different types of textiles are in fact variations of the basic plain weave, which is simply the interlacing of the warp and weft threads. This can be done on a hand loom, which is increasingly rare these days except for expensive custom orders, or by mechanized processes whereby it is possible to produce many different weights from the very light voiles and taffetas, calicos and poplins up to quite heavy plain cloths. If modifications are introduced to the plain weave to alter the balance between the warps and wefts, it is possible to get the following recognizable materials.

When making selections of textiles it is important to become familiar with the various codes that are necessary to address for your area. Clearly there are codes in all commercial applications, but in residential applications the professional also needs to be aware of the need to meet the safety needs of the clients. Even if there are not specific codes for your area, safety is an ethical issue you must address.

Twill pattern is produced by one weft passing over one warp, then under two warps, over one and under two more, and then by this pattern being started one warp thread further on in every subsequent row.

Photograph by Andrew Wood
even ‘classical’ detail in the 15th century sometimes became ‘Gothicized’.

In many rooms of the Renaissance period, it was in the details that a room achieved its classical feel. However plain the walls and ceiling of any room were, an elaborate chimneypiece or doorframes could transform it, and it was frequently on such carved decorations that the greatest expense would be lavished. In particular, the chimneypiece lent itself to personal interpretations, as Sebastiano Serlio already noted in Part One of his Treatise on Architecture published in Venice in 1537. Although it harked back to medieval prototypes, the hooded variety continued in favour well beyond the 15th century and into the next. Sometimes this had only small beams for support, particularly in poorer homes, as is shown in Paolo Uccello’s painting Woman Redeeming her Cloak with the Host of the 1450s in the National Gallery in Urbino. This was because it could thus project into a room without taking up space at the sides if supported on brackets, and offered considerable opportunity for ingenious decoration, sometimes including the family coat of arms. As early as the 1460s the type that was to dominate most European rooms from the later 17th century onwards, with the fireplace recessed well into the depth of the wall and a simple moulded surround to the opening, made its appearance in Mantua’s Camera degli Sposi.

As the focal point of any room, as much for light as for heat on dark nights, it was natural that artists should
(see above), and rapidly developed his almost romantic ideas of movement and variety in architecture from his experience of the Roman baths and palaces. Adam was a brilliant architect, and his external designs for Edinburgh University and Kedleston Hall are of European importance. But he excelled at interior design, to which he devoted his greatest inventiveness, in his London business with his brother James.

In spite of the new feeling against Palladian heaviness that had appeared in the mid-century, it was Adam who declared war on ponderous architectural features in interior design. Although he was brilliantly familiar with the entire vocabulary of Roman decorative art, he had the genius to couple this with his study of other styles such as the Italian Renaissance (notably 16th century artists including Michelangelo and Giovanni da Udine); the result is best seen in his Entrance Hall at Syon House, Middlesex, where the rich effect is the result of an amalgam of ancient and Renaissance Roman detail. Paramount also is Adam’s immaculate sense for colour, and the play of light and shade, again notably revealed at Syon where he has us pass from whites and greys in the entrance, to sumptuous greens and gold in the famous Ante-Room, and then into a series of alternating paler and richly-coloured interiors which also vary greatly in shape and size. Syon’s Long Gallery is one of the most satisfying rooms of the 18th century.

Similar contrasts are found in all his major country house interiors, notably at Kedleston, Osterley Park, Harewood...
Lesson HD 6
Towards Stylistic Variety: from Empire and Regency to the Romantic Period and Historicism

In our age of internationalism and the rapid spread of information through photography and television, it is difficult for us to imagine the excitement felt by artists and designers at the new accessibility of visual records of historical styles increasingly encountered from the 18th century onwards. In the previous Lesson we saw how books of engravings spread accurate archaeological information not only about Greece and Rome, but also about other, more exotic styles. The allure of classical architecture and decoration could not sustain itself exclusively against the appeal of new styles, some of which made their appearance in the midst of Neo-Classicism - the Egyptian, for example, first in the work of Piranesi, then in much Empire and Regency taste.

The transition in France from the Neo-Classicism of the 18th century to the Empire style is arguably smoother than the arrival of the contemporary English Regency style. Parallels are always drawn between the principal national representatives of the styles, Charles Percier and Pierre François Léonard Fontaine in France and Thomas Hope in Britain. Both published their ideas in highly influential engraved books, on the one hand the Recueil de décorations intérieures (from 1801) and Hope’s Household Furniture and Interior Decoration of 1807. Percier and Fontaine spent three years in Rome and knew Renaissance and Baroque architecture at first hand; it seems extraordinary that they noted how much more suitable Renaissance works were as sources of inspiration for their day. This was a feature which linked them with Hope, since

Left: The Royal Pavilion
The Banqueting Room
in 1925, and the style managed to exist alongside the innovations of the modern movements in architecture and the decorative arts. Much of its appeal was its eminent suitability for mass production, although there it also provided excellent opportunities for extravagant displays of conspicuous consumption when expensive materials were adopted by designers like Jacques-Émile Ruhlmann (1879-1933) and Robert Mallet Stevens (1886-1945).

Sometimes known as the ‘jazz style’, Art Deco designers took advantage of fashionable quirkiness such as the interest in ethnic art, the use of Deco on ocean liners and the image of speed (the *Train Bleu*, *Orient Express* and so on) to incorporate elements from these areas into their designs. This resulted in cross-fertilization of motifs, with ‘yachting’ style creeping into rooms such as the Chanin bathroom in New York’s Chanin Building of 1929, and the type of decorative detail associated at the time with railways (concealed electric lighting, streamlined forms suggestive of locomotion) appearing in interiors such as the Lobby from the Strand Palace Hotel, London (now dismantled, Victoria and Albert Museum) and the famous bathroom of Tilly Losch, combining coloured glass, concealed lighting and mirrors to suggest a glamour worthy of Hollywood.
Isometric Projection
This is a similar projection to axonometric projection but the angles are at 30°. The corners of the figure are not at right angles and it is, therefore, not a true plan; the result is a rather distorted image. However, for certain shapes you will find it most useful. See Drawing D23. Circles in this case will appear as ellipses. See Figures 2 and 3 in Drawing D23.

- Figure 1: Projection of true square produces a hexagon
- Figure 2: Circles on plan appear as ellipses
- Figure 3: Circles on elevation appear as ellipses
- Figure 4: Circles shown on plan and all elevations
distance apart for each line of lettering, or you will get an uneven appearance which will look very unprofessional. Use different size lettering for different types of notes if you wish to bring out particular important points, but always use larger lettering for the main title and sub-headings.

In countries such as the US, lettering should be done without serifs, but in all events the use of simple, clear block lettering is important to master. The use of guidelines for hand lettering is critical and should always be used in association with presentations and/or drafting. Well developed hand lettering is difficult to master, but it can make or break your presentations.

When lettering, set up the guidelines and use a set square/triangle and tee square or parallel bar to keep the vertical and horizontal lines straight. Additionally, only capital letters are used. Excellent hand lettering is a true craft and it must be honed.

The spacing of letters is most important, and good spacing is decided by a visual equalizing of the distances between the letters that is obtained only through practice. Don’t bunch all your letters together or put them so far apart that you have to spell out each letter before you can make out the word: try to arrive at a happy medium.
Drawing D37b
Graphical Symbols

North Points

Trees

Shrubs

Pool

Paving

Grass
Conclusion
Learning a CAD program and eventually getting confident and up to speed with drawing effectively with CAD generally starts with reference to the manual accompanying the program purchased. It is common to dispense with the printed manual and instead to include the documentation on a CD ROM or DVD that comes with the package. There is a wealth of CAD packages available on the market, and often a bit of research is needed before making the decision as to which program to purchase.

It is very important to remember that a proficiency in using a computer and a CAD program will not automatically make the operator a better designer. At the end of the day, CAD, though powerful and versatile as it may be, will only serve as a time- and cost-saving tool and not as an enhancement to one’s design creativity. By persevering and learning the CAD software to hand, one can effectively “record” one’s creativity and design ideas quickly and accurately and thus in theory have more time to get creative.

There follow some examples of CAD drawings rendered by Eddy Lo, a Rhodec/London Metropolitan University Bachelor of Arts graduate. The drawings are taken from his actual BA project work, and are reproduced with his kind permission.
Figure 2 shows the design in the “real world”.

In Figure 3 the potential of a circular form is shown through the complex manipulations of a ‘positive’ and ‘negative’ series of elements, and one begins to pick out from the circle the various other sub-forms which relate to it. If you study Figure 3 for a minute you will find several interesting effects created by the presence of the circular form. Most of these forms are created by the careful study of one form against another. It is essential that the designer has the ability to consider one element against another throughout the design process.
These illustrations show how the whole character of a room can be dictated by the arrangement of assorted forms. The various structures in the room can be arranged to create open vistas, quiet corners or repetitive forms. The introduction of soft, rounded forms can act as a break on the harder, angular shapes until, in the final illustration, we see how the softer forms can be arranged to divide off the room completely.
When you are able to see a view out of a window, do you often feel better? Do you think that it is always the view that is part of that feeling or do you think that having the access to the daylight plays a part in that feeling of well being? Many times it is a combination of the two, if your view is one you love. Most of intuitively understand that when people can have access to natural light they are more productive employees and students, and are happier people overall.

As an interior designer, it becomes important to gain a full understanding of some of the options for using daylight in the work we do. Can interior windows be used effectively; can volumes of space help; how high are the windows that can throw light into the room? So many options are available to us as we design interiors.

Of course, we cannot bring up the issue of daylight without addressing the economic factors that are involved. In many countries today we can drive by schools that have been built over the last few decades and see only a few ribbon windows that may throw a sliver of light into hallways or stairwells. This is because these buildings were built for economies, not for people. The air exchange is often quite minimal and the light is regular fluorescent. As you explore this area you will see that fluorescent lighting, while quite economic, is usually very disturbing to people who have to be under it for much of their day. It works well in areas for storage or where one does not spend a great deal of time;
horizontally stressed wall end features. The eye is drawn either vertically or horizontally, depending on the pattern, and thus tends to elongate that dimension.

You may well have seen all these illusions before, but it is nevertheless useful to demonstrate the various phenomena if only to reinforce the extent to which such effects can be useful in the field of interior design. By understanding the many and varied resources at your command you will learn to use them all the more effectively in the interior.

You should be continuing to use your sketchbook, and your studies in it should be showing more and more relevance to interiors. At the end of this Unit we would like to see your sketchbook once more, and we will be looking this time not only for positive evidence of creative ideas, but also for the ways in which you have applied these ideas to interiors. It is a good idea at this stage to do some sketches of interiors showing the varying effects of lighting from different sources: for instance, ordinary daylight through a window or other opening; artificial light from ceiling and table lamps; the lighting of individual forms by spotlights. Try different methods of producing effects of light and shade - charcoal or pastels are particularly good, but don’t forget to fix your drawings afterwards.

In the below illustrations we see some of the potential uses of optical illusion used within interiors.

In Figure 1 we see that the floor design is so dominating that it can be used to disguise and hide quite large forms in the room. At the back, behind the screen, a large form is covered with the floor pattern and keeps the back portion of the room uncluttered to some extent.

In Figure 2 the floor pattern has an undulating and uneasy effect that can direct and contain forms laid on it.

In Figure 3 one can see the advantages of defining certain parts of the room. The dark areas could be carpet or differing floor material and can create visual ‘holes’, leaving the main portion of the room as a ‘walk through’ space. Note the positioning of objects in the room.
Chromatic and Achromatic Colour - Definitions

Before we continue with our studies it is essential to our progress that we fully understand what is meant by chromatic and achromatic colour.

Although the word ‘colour’ is used in the term ‘achromatic colour’, achromatic colour consists of black, white or greys, the last being mixtures of only black and white. Therefore black and white and all mixtures of these neutral greys constitute what is known as achromatic colour.

All other sources of colour such as red, blue, green, yellow, etc. are what are known as chromatic colours. It is important that this difference between achromatic and chromatic is clearly understood before proceeding further.

Colour Notation

Colour notation is basically a system of identifying colours accurately. As we have seen, the name of a colour such as Orpheus means nothing, and there is obviously no indication in the name to suggest a colour by which it can be even remotely identified. It might even be achromatic. The name Orpheus was actually selected from a leading paint manufacturer’s paint colour card and it is quite possible that a different manufacturer could be calling an entirely different colour by the same name, or the identical colour by a completely different name. So names of colours by themselves are most unreliable as far as the identification of a precise colour is concerned.

If ten students were each given a box of paints and an outline drawing of a rose and then asked to colour it in ‘rose pink’, although most of us would have an idea of what rose pink is, the result would be ten different interpretations and therefore ten different colours. It is because of this discrepancy between names and colours that it is very important indeed to have a reliable system of colour notation whereby we are able to describe a colour accurately so that the exact colour will be instantly recognizable by a third party. The ability to do this is extremely important to designers and colourists.

There are various systems of colour notation in use today, but the one most favoured by designers and architects throughout the world is that of the American colourist Albert H. Munsell. Munsell was born in Boston, Massachusetts in 1858 and was primarily an artist, although later on he became a lecturer. He became very interested in the detailed study of colour and in the late 1890s devised his system of colour notation to assist with and to supplement his lectures on colour. From then onwards he
to obtain one of these colour cards if possible, as they are invaluable for the pre-selection of paints. Two types are published, one printed, the other a genuine sample of the actual paint on a sample of watercolour paper mounted on the colour card. It is usually the printed cards that are readily available in art shops.

The Structure of Paint
There are three main constituents of paint: pigment; binder or medium; and driers - four if you count thinners. Earlier we mentioned that the Egyptians added certain ingredients to their pigments to make them stick together, and make the paint more permanent. In today’s modern manufacturing processes the binder is essential. The binder is that part of the paint, whatever it is oil, watercolour or acrylic, that binds the particles of pigment together when the paint has dried, and which also serves to carry the pigment in suspension while the paint is being applied. Driers are substances which are added to the paint to help the paint dry. Thinners are substances that are added to the paint to make it workable so that it can be spread easily. It is not intended to go into any further detail than this on the structure of paint, but it should be noted that most paints dry by oxidation to the air, leaving the pigment particles, and thus the colour, evenly spread on and bound to the surface.

Colour Mixing
When mixing colours it is essential that palettes, brushes and water are kept scrupulously clean and the water changed often.

As watercolour brushes are so expensive we would suggest that you keep one special brush, possibly a number six, exclusively for the mixing of the colour.

An older, somewhat worn brush would be ideal for this purpose. Whatever you do, do not try to apply your colour with it. Keep it exclusively for mixing.

Wherever possible select a colour direct from the tube for your requirement. Where this is not possible and a colour match cannot be made, select a colour nearest to the one you require and then add to it a second colour to modify it. You may have to add small quantities of other hues as well. If, for instance, you want to mix a very light orange from yellow and red, the quantity of each colour will be dictated by the tone of the colour required, as will the order of mixing. In this particular case it will be necessary to use a larger quantity of yellow than red. As the orange is to be light in tone it will be found that you will need more yellow to stain the red than vice versa, and the desired tone will be achieved much more quickly and without wasting much paint. Put out the bulk of your colour, in this case yellow, and then add to it very small amounts of red, which has a stronger staining power than yellow, until the required tone of orange is achieved.

Figure 10

a Mix up your colour as near to the colour of the sample as you can. Paint this across the end of a strip of paper and let it dry.

b When dry place your test strip against the sample. In this case it is clear that the test strip colour needs some more red added to it. Mix in a little more red and repeat the process until the test strip and sample match.
This will dissolve the pencil colour, turning it into a normal watercolour pigment, and a colour wash can be obtained. The proportion of colour dissolved will naturally depend upon the amount of water used and the pressure applied. It is also possible to dip the pencil into water and then to apply the colour. Figures 22a to 22f show examples of colour blending.

Coloured Paper Grounds
Coloured paper grounds such as Canson papers, which are normally used for pastels, can also be used in conjunction with coloured pencil. These have the advantage of providing a background without having to resort to watercolours. Dark papers can be selected to enhance some of the lighter tints of pencils which would otherwise not be suitable for use on, say, white cartridge paper. Here again it is up to you to experiment with both pencils and papers. Figures 23a to 23c show some examples of selected colours used on coloured Canson papers.

Figure 22
- Shows the simple blendings of two colours.
- Shows the blending of two primary colours R and B using Conté water colour pencils. At 1 and 2 the colours have been blended dry. At 3 the colours have been blended by overbrushing with clean water. A similar effect can be achieved with ordinary pencil crayons and a clear solvent felt tip pen.
- Shows two examples of how colour can be ‘blended’ simply by rubbing the original colour with a paper stump as used for blending pastels.

Figure 23
- Examples of pencil crayons used on
  a) A light, neutral coloured paper
  b) A dark, low density paper
  c) A light, high chroma paper
Rendering Plans and Elevations with Art Marker Pen

We often think of renderings only being in perspective (see Figure 20), but rendering plans and elevations can be an excellent organizational tool for sample boards, and can be done quickly and effectively in a variety of techniques.

You might think that since plans and elevations are two-dimensional drawings, matters like shadow and texture may not be as important. This is not at all true. You are rendering these, so all the matters that you must address in the perspective will also need to be addressed in these two-dimensional drawings. The difference is that when you draft these drawings you always include dimensions complete with dimension lines. When you render them you create a drawing that is less technical, since it will be used as a tool to explain, to give the client an idea and to organize a presentation.
Figure 24
Taking clothes from a chest of drawers

Figure 25
Drying after a bath

Figure 26
Drying a child after a bath

Figure 27
Using the W.C.

CIRCULATING

Figure 28
Passing between two pieces of furniture at or lower than table height

Figure 29
Passing between two pieces of furniture at or lower than table height, and a taller piece of furniture or wall

Figure 30
Passing between a tall piece of furniture and a wall

Figure 31
Moving a double wardrobe up a staircase showing minimum headroom, handrail height, and a going and rise of $8\frac{1}{2}\"$ (22cms) and $7\frac{1}{2}\"$ (19cms) respectively
Figure 1

DIRECT

Method
A. Ceiling mounted

Fitting
Low voltage spotlight

Lamp
150w, 12v internally silvered reflector lamp

Illum. Levels
a 807 b 130 c 33

Comments
Reflected light from the table almost equals direct light on top of the ball reflections on wall. Use mainly for high lighting special displays.

Lighting Methods

A. Ceiling mounted fittings
B. Suspended or pendant fittings
C. Wall brackets
D. Ceiling recessed units
E. Portable fittings - floor or table lamps.

The illustrations on the following pages will help to explain the light distributions by the fittings shown. The dimensions and physical characterization of the test situation are shown. All light except that from the light fitting was eliminated. The type of fitting associated with its distribution is indicated against each picture, together with illumination levels, read at points a, b and c, shown on the plan at table level of 460mm (18”). The lamps and wattage to each fitting are stated. Where fluorescent lamps are used the lower efficiency “de luxe” warm colours are adopted as being suitable for most home situations. All illumination levels are given in lux (lumens per square metre), of which more soon.
Comfortable Lighting Conditions

Contrast

Glare is a question of contrast, and light sources which appear bright and glaring in one situation will appear almost invisible or even dark when their surroundings are changed. The simplest example of this is the headlamp of an oncoming car, which against a dark night will appear glaring, while if switched on during the day will be scarcely noticeable.
sheer fabrics can all be used with great effect. Austrian blinds and swags and tails will mask part of the window area and have a similar effect. Roman and roller blinds will also allow you to control the amount of light entering the room at different times of the day. Don’t forget that, in countries with very strong sunlight, fading of fabrics must be considered.

Creating Window Treatments with Design Elements and Principles in Mind
As with all forms of your work, remember that designing custom window treatments should not happen without the elements and principles of design being utilized in the treatment as well as for incorporating them into the space. Window treatments, like all parts of your work, are not designed independent of other elements but in perfect concert to create the whole environment. These relationships cannot be stressed enough.

Proportion
Unfortunately one seldom finds perfection and windows are no exception. They may be too large or too small, of an awkward shape or poorly sited. With careful handling, however, many of these problems can be eliminated and the whole ambience of the room altered for the better. Small or low windows can be corrected by mounting the track well above the window recess and concealing the gap with a deep valance or pelmet. “Square”, featureless windows can be given shape and balance by the use of curved valances or shaped pelmets.
mind should both be expanding constantly with thoughts and uses for both old and new materials of all types.

While building principles remain fairly constant, practices have radically altered through the centuries. Increasingly, cost is a major factor: speed and ease of working naturally play their part to the point whereby, in some cases, pre-formed interiors are delivered on site that slot into a structural framework and plug into service ducts. This may seem a very limited system, but with a choice of components there is interesting potential offering further scope and challenge to the interior designer.

On the other side of this coin, we are seeing more and more residential customers wanting to participate in the work of designing their own environments, creating interiors that are a part of themselves and of their families. The designer can be the professional who helps them realize their dreams.

Above: A meeting room in a company headquarters rendered in marble and wrought iron exude an air of elegance and confidence.

TheAmtico Company Ltd.
The Tree From the time a tree is little more than a few centimetres or inches high, it increases in girth and height each year by the growth of new cells at the cambium layer, a slimy film protected from damage by the bark. On the inside of this growth point there is a flow of water from the roots on its way to the leaves and, on the outside of the cambium layer, a return flow of starches and glucose created by photosynthesis in the leaves.

The combination of starch, glucose and water is consumed in the new growth of timber, apparent each year in the form of annual rings grown during the spring and summer seasons. After some years’ growth (often decades or even hundreds of years in some cases) the centre of the trunk ceases to carry sap to the leaves and dies off. Then the heart-wood (the central part of the tree, hardened and matured by age) actually serves little function other than providing structural support to the mature tree; but its toughness is an essential feature for the manufacture of furniture. All other parts of the tree should be discarded because they are prone to infection by woodworm and decay.

At the time of felling, half the weight of a tree might consist of water. Before it can be used for interior purposes the timber must be seasoned so that its moisture content is reduced to balance with the surrounding atmosphere. In losing this amount of water, timber shrinks substantially. Seasoning consists of speeding up the drying process while controlling it, to minimize deterioration of the timber caused by uneven drying, which can result in excessive cracking, twisting and warping.

Seasoning may be achieved by natural or artificial means, but certain practices are common to both methods. Clearly, the narrower the cross sections, the easier it will be to extract moisture from the centre. Timber is therefore cut as close as possible to the size required, allowing for shrinkage during drying, and for subsequent machining to finished dimensions. The timber is then stacked flat with slats between each board, to allow an even and free movement of air. In the case of natural seasoning, or air-drying, the stacks of timber will take from one to six years to dry, depending on the species and the thickness of the boards. At the end of this time some additional drying, or ‘second seasoning’, may be necessary. This is done by storing the timber in a dry and heated space to bring the moisture content down to a level suitable for products that are to be used in a centrally heated building.
is WBP (water- and boil-proof). ‘Moisture resistant’ and ‘interior’ grades are also available.

**Blockboard** and laminboard are frequently made in the same factories as plywood, using the same raw materials. The core is made from timber strips glued edge to edge - broad ones for blockboard, and not more than 9mm (3/8”) wide, narrower strips for laminboard, making it more stable. Large sheets of strips are levelled and cross-veneered on both faces, producing a three-ply board. For five-ply blockboard two more veneers are then added on the outside, the grain this time running parallel to that of the core. This would be used as a ground for good quality veneered panels, where the major variations of shrinkage in the core are concealed by the additional layers of veneer. Where an additional decorative veneer of a special timber is applied on one face, there would be a balancing timber veneer on the opposite face.

**Chipboard** is made from layers of synthetic resin glue mixed with graded wood chips, with wood dust or wood flour on the outer surfaces to give a fine finish. Chipboards are not particularly strong or rigid but they are stable. Furniture manufacturers use them extensively as a core for veneering. The manufacture of chipboard can be highly automated, and low-grade timber can be utilized. These advantages are reflected in the price.

**Hardboard, or Fibreboard** had a bad name, largely because it had been marketed in unbalanced form, with one smooth face and the back textured. In changes of humidity it could wrinkle and look terrible. Nowadays a double-faced version is available in a variety of thicknesses. Pulped timber is steamed and heavily compressed in a process like feltmaking. As a result it can break down in wet conditions, but indoors its smooth surface is ideal for painting and lacquering. The core is inclined to be soft and rather woolly, and so structurally it will require especially careful detailing.

**Medium Density Fibreboard (MDF)** is a valuable addition to the range of man-made timber panel products. It has many of the attributes of solid timber but with a strong,
The surface of foam-padded seating may be very soft to the touch, but it is inclined to look uninviting. Compared with the relaxed appearance of the sofa with down-filled cushions, foam tends to give the appearance of a soldier on duty. Foam cushions are comfortable provided that the seat platforms are properly sprung; but these fillings are too often of poor quality, with the result that the cushions go ‘sad’ rather quickly. New families of foam may warrant exploration for upholstered furniture applications.

When a first class down and curled feather combination is used, cushions will have good recovery, provided that the covers for the down and feathers are made of sympathetically lightweight material that are also feather-proof (do not allow the feathers to creep through the material).

A product known as ‘Dacron Fibrefill’ is made of crimped Terylene fibre. Used for cushions and fixed upholstery it is claimed, with some justification, to combine the softness of down with the recovery of latex. Rolls of puffy wadding, or batting, rather like cotton wool and about 50mm (2") thick, are applied either between layers of muslin or with the faces heat-sealed to prevent the material pulling out of shape during upholstery.

Fibrefill can be used for cushions in two ways. They can be totally filled with it, in which case it is folded around itself, sufficient material being used so that a 50mm (2") thickness is compressed to 12.5mm (½") in the cushion.
bottom, to ensure no penetration of rain. Other tiles have grooves set in their sides that interlock with the adjacent tile (see Figure 1.2c).

**Flexible Sheet Materials** The most common of these roofing finishes is built-up bitumen felt (Figure 1.2d). This is produced in 1 metre wide rolls and is laid on the roof, usually in three layers, each bonded to the other with hot bitumen. Water penetration is avoided by placing alternate layers at right angles, and overlapping adjacent sheets.

**Monolithic Materials** Mastic asphalt is a mixture of aggregate (stone granules) and bitumen (a tar-like substance). The material comes to the building site in blocks where it is heated up to form a liquid that is applied in two layers to a total thickness of 20mm (¾”).

**Rainwater Drainage**
A great deal of rainwater falls on a roof, and this needs to be effectively collected and discharged. Because of this, ‘flat’ roofs are actually built ‘to a fall’ (incline) of 2° or so. At the lower end of the fall a gutter is required to collect the rainwater. The gutter itself is laid to a fall and at its lower end a downpipe is connected which takes the rainwater from roof to ground level. Here the water falls into a gully (a drainage fitting incorporating a ‘U’ bend) and is then discharged into the drain. Figure 1.3 shows a typical gutter and downpipe arrangement.
External Walls
External walls may be either ‘load-bearing’ or ‘non-load-bearing’. Load-bearing walls are comparatively thick and heavy in order to support the loads of the roof, floors and contents of the building. Thin, lightweight non-load-bearing walls can be used in framed buildings since the major loads are supported by the stanchions of the framework.

Curtain Walls are a form of non-load-bearing external walling that forms a lightweight skin surrounding a structural framework. It consists of a lightweight framework (usually of aluminium alloy) into which are fitted glazed or opaque panels. Figure 2.5 illustrates such a system comprising ‘mullions’ (vertical members) which are attached to the floor, or beams supporting the floor of the building; ‘transoms’ (horizontal members) which fit between, and are attached to, the mullions; solid panels comprising a water-resistant outer layer, an inner layer which forms the internal surface of the wall, insulative infill and a ‘vapour barrier’ which prevents the passage of water vapour into the panel; and glazed panels.

Curtain walls form an immense impervious barrier that is particularly exposed to the effects of wind and rain. Special features are necessary to ensure that water does not penetrate into the building: the panels fit into the transoms and mullions by use of ‘neoprene’ (a synthetic rubber) gaskets which tightly seal the panels; and water
Figure 4.15 illustrates a slatted eaves detail using head-nailed slates. Note that at the bottom of the slating two courses of slates are necessary to prevent the ingress of rainwater, and that ventilators are set in the fascia board to ensure a free flow of air within the roof space over the insulation.

Slate ridges may be made using materials such as zinc as a cap that covers the top courses of slates. The ridge could also be formed using tiles to cover the top slates in a similar manner to the tiled ridge illustrated in Figure 4.16b. A slatted verge follows the principles of a tiled verge using slate-and-a-half slates on alternate courses to maintain the staggered joints between courses. A layer of slates is laid on the gable wall as an ‘undercloak’ and the slate ends are bedded in mortar along the verge (see Figure 4.16c).

Tiles
There is an immense range of tiles available that might be categorized as follows: tiles that overlap between courses and abut at the sides (such as plain tiles); tiles that interlock at the sides and between courses (such as pan tiles); and tiles that interlock at the sides and between courses (such as interlocking slates).

Clay is the traditional material used for the manufacture of roof tiles, while concrete is a very widely used less expensive alternative.

Plain Tiles are small - typically 265 x 165mm (9.5 x 6.5”) - and are designed with a slight camber so that, when laid, water is unable to creep under them by capillary attraction.
Pre-cast Cranked Stair (Figure 7.15) This is a straight flight that incorporates a quarter-space landing at the top and bottom. When two or more cranked stair units are installed, the quarter landings are linked to form a half-space landing. The stair is reinforced in a similar manner to the straight flight stair (above) with continuity reinforcement in the side of the landing area to link with that of the adjacent cranked stair unit.

Handrails, Balusters and Nosings for Concrete Stairs
Most concrete stairs are fitted with mild steel balusters and handrails. Figure 7.16 compares two alternative approaches: where the balusters are fitted to each tread and the handrail screwed or welded to the tops of the balusters; and where substantial balusters are fitted to every fourth tread and a ‘bottom rail’ is installed. Lighter weight mild steel ‘standards’ span between the handrail and the bottom rail at intermediate intervals between the balusters.

Handrails usually comprise a mild steel ‘top rail’ covered by a plastic or timber section to give comfort. Two alternatives are shown in Figure 7.17: a plastic handrail cover clips over the top rail (a); a timber handrail is screwed from underneath to the top rail (b).

Balusters are commonly of hollow, square or round cross section fitted either to the top surface of the tread or to the side of the staircase. Figure 7.18 illustrates a tread.
Lesson PP 2
Setting Up Your Own Business

Up to this point we have talked quite a bit about what it would take to procure employment. We have not discussed the business aspects of owning an interior design firm because, as stated at the beginning, in some countries it is important to have experience working in the field first. The types of firms are numerous and it does take quite a lot of time and exploration to understand the type of business that will be right for you.

Beginning a business can be a complex issue. Business can take many forms from the most simple of Sole Tradership/Proprietorship to the most complex of a Corporation. There is also the temporary business of a Joint Venture that may need to be considered from time to time. There are pros and cons related to each type of business formed, so understanding each of them will be to your benefit. We will briefly identify various types of formations; however, a fuller understanding will take a good deal of reading and research. We will discuss Sole Tradership/Proprietorship in a little more detail because this is the set-up you are most likely to start with.

The following list briefly describes various interior design business formations in many countries. It is your responsibility, as the business owner, to understand all the implications affecting you. We will discuss the importance of consulting with professionals in various fields in order to appreciate fully what you need to understand.

- **Sole Tradership, or Sole Proprietorship** is the simplest form as well as the least expensive. The owner is entirely responsible for the business success or failure.
- **General Partnership** is similar to sole tradership/proprietorship with the exception that one works with a partner or partners. All partners are responsible for the business success or failure.
- **Limited Partnership** often involves a partner or partners who are not involved in running the business (sometimes known as silent partners). The financial responsibility is limited to the investment each partner makes.
- **Corporation** has stockholders who invest in the company as well as officers and directors who run the company. The stockholders are not responsible for the business success or failure; the officers and directors have that responsibility. The stockholders will be paid a portion of the profits. Those who run the corporation have responsibility to inform the stockholders as to success or failure, and to use their finances in a responsible manner.
- **Limited Liability Company** is similar to a partnership but with the limited liability that corporations enjoy.
- **Joint Venture** is where two firms come together to form a company temporarily. This may be to work on a specific project. Sometimes joint ventures will move forward to form a standalone partnership or corporation.

These formations all have their own positive and negative aspects. It may be appropriate to begin with one type of formation and to develop it into another as the business hopefully grows and prospers.

**Thinking It Through**

There are so many things to consider when you are thinking of starting your own business. Hopefully you have done your homework and you continue to meet people and learn about the pros and cons of a variety of business formations that may work, and you have eliminated the ones that will not work for you. One of the greatest considerations is how to finance the running of the firm. The first couple of years are often rocky, and money may be lost trying to get the company on firm ground, so it is very important to locate professional help in the areas of accounting and banking. You must also consider taking legal counsel from someone who is familiar with interior design firms, as well as getting help with liability insurance issues – a crucial area. Do not make these considerations lightly: find people you feel you can trust and who have experience in these areas. Already, you are spending money just to explore the possibilities!

One of the best ways to begin a business is to write a company mission statement. A mission statement is a very important first step because it will help to guide your company and keep it on track. Make sure the statement is
strong and try a few variations to see what may work best for you. Take your time with this step and explore the ways to write a good, strong mission statement.

Once the mission statement is written and says just what you wish it to say, begin to think about the specific values you hold and to commit them to paper. What values are important to address and to state for your company? These will help you not only to become clear about what is important, but along with the mission statement will help you to make decisions about projects to take and projects to decline. It is always important to know the projects that you need to decline as well as the ones to take on: there may come a time when this is a fine line. If the project is a well-paying one but not right for your company at the time, you may need to suggest another firm.

With the mission statement and the values written, you can design a plan to get you where you wish to go with the company, and to begin this process you must write a business plan. This may be something that becomes boring for the creative person, but it is important to have a document to show you where you stand and what you can afford, and to help you to understand the market you wish to tap. Each of these areas should be supported with a great deal of information.

The mission statement should help you to guide your image of the company. Most designers have an idea of the image they wish to portray, and designing an image is a part of starting a business that should come naturally to the designer. In many cases you have probably thought for a long time about the name of your firm. The name you choose is very important as it not only says a great deal about you but also about the business you run. If, as a sole proprietor, you choose to use your own name as a business name, make sure that it speaks well of the work you do in the area in which you are working. Does your firm need a slogan, and what graphic image might reflect the work you are doing? These are the things that create the first impression in a client’s mind. Try to see how they project themselves to the target market and ask various people their opinions.

With these matters dealt with and a good understanding of which approach to this new business will work best, you need to decide if it is financially viable and personally rewarding enough to move to the next step of legally filing a new business. If it is a sole tradership/proprietorship, the paperwork should be minimal.

Where to Work

Once you have made the decision about the type of firm you will set up, and you have the business and finances in place, you will need to have a place to work. Will you be able to work from a home office? Will you need warehouse space for storage of furniture and accessories for clients or if you have a retail space? Will an office space be important for the image you wish to create, and how will that image work with your studio space? As usual, there are pros and cons to both of these considerations and quite possibly local planning regulations/zoning laws will govern some of these decisions.

If your plan is to deal in reselling, working from home may be a problem unless you live in an area that has planning permission, or is zoned, for multi-use. If clients and/or employees will be in and out of your home, traffic and parking may cause problems with your neighbours. If you are only providing services and do not have employees or will not be meeting people often in your office, then a home office might be right for you.

If you are going to be reselling merchandise or need to have a large visual presence in the area where your client base resides, then you must look for adequate office space. You will have to decide just how much space you will require, since you will be paying rent on every single square metre or foot. A design library alone takes quite a lot of space. Many of us are lucky enough to be able to use the internet to keep that type of inventory down, but you will still need space for storage of documents, plans, samples, materials used for presentations, etc. This field is material-intensive, and having room to support the sheer volume is an inescapable necessity. Being clear on the space you need and the space you do not need will save you money, and that is very important when you are beginning a new business.
Working from home has its own set of considerations. Are you a person who can work with other things going on around you? Will you have a space where you can retreat and have close to hand the items a design studio needs in order to perform daily tasks? Will you be able to have business phone conversations without background noises? Because you have come this far in your studies, the chances of you being able to make a home office work are high. However, consider carefully when the time comes to make a decision about the location of your studio, since it also has marketing implications.

**Day to Day**

**Setting Up A System to Manage The Business**

In most cases, running and managing a business is not a one-person position. Being able to make a living from being a sole proprietor without employees and/or consultants is rare. The business is difficult to grow and difficult to maintain. Furthermore, we are not all good at all aspects of running and managing a business, so knowing what your strengths and weaknesses are is critical when establishing your firm.

Planning a system of management is very important. This is very personal in nature and needs to be worked out thoroughly, with the due consideration given to the records that must be kept from a design standpoint as well as from a business standpoint. Read and consult many resources to help with this aspect of setting up a business.

**Managing Time**

Time management is one of the greatest problems for any busy person, and that includes the interior designer. Being able to plan for others does not mean that you should not do the same for yourself. Clearly, planning time is a bit different from planning space, but as interior designers we always take into consideration the time that will be saved when a space is planned appropriately. The same will be true of your office. Finding methods that will work for you and your employees will be very important. There are many resources available to help you with this issue.

Not only is time management important when you are working or for the owner of the firm, but the student and employee can also gain a great deal of time when a good management system is in place. Things as simple as combining client meetings with other errands can save a great deal of time. Learn as much as you can about effective ways of managing your time as you move into the professional world.

**Clients: Finding Them, Keeping Them and Having Them Return**

**Marketing (Encouraging The Client To Choose You)**

Effectively marketing an interior design practice takes a great deal of time and a great deal of effort. Hopefully you have already evaluated the target market and know the places where people will be looking for design help. Marketing is not only advertising but writing articles, giving presentations to groups and educating the public. There are many forms of marketing and unless you have prior business experience it is advisable to consult with marketing professionals to evaluate the options available to you.

**Choosing The Client**

Finding your target market is sometimes second nature and other times it takes a considerable amount of work. Knowing who your clients might be and where you can find them is very important. Who are they and what are their interests? What do they read? Where do they have dinner and what social activities are important to them? How can you meet them? How can you help them? What do you have to say to them? You must consider all these questions and more when you are choosing clients.

You must also recognize that not all clients are right for you. Do you see signs that your ideals do not match? Do
they have expectations you cannot meet? Are they willing to work right alongside you or do they just want you to complete the project as they direct you? Do they wish you to meet any legal obligations or are they just looking for design services? You will need to learn to read what your future clients are looking for in a designer as much as what you are looking for in a client. There will quite likely be times when you will have to say, “This relationship is probably not going to get you the best project, so I recommend that you seek another designer”. You may recognize this before the project ever begins or you may learn later in the project that the relationship will not work. Either way, your honesty will be very important. Hopefully you will be able to direct this client to another designer who might help them. In most cases your client will be very grateful for your honesty – after all, you will be saving them money.

Working With Different People

As you can see, interior designers work very closely with all kinds of people. We cannot emphasize enough how important it is for you to be able to work with many types of people. You will be greatly enhancing your career and the success of your firm if you can work well with a broad range of personalities.

Making Sure The Client Is Satisfied

Any designer will tell you that a satisfied client will return to you for future help. This means not only giving you business with projects of their own but also free “word of mouth” recommendations that will bring you other clients. In any business, making sure that your client is satisfied with the service you provide and the work you do is the best policy. Many businesses have failed because the owners lost sight of the service or product they provided and set their sights on making money only. Every unhappy client will bring your business a bit of failure. Not every client will be satisfied, however hard you try, but the more satisfied clients you have the greater success you will enjoy.

This means excellent management skills on your part. Do not take on more projects than you can handle. This will only mean more dissatisfied clients. If your business is growing beyond the work you can do, it may be time to consider hiring employees. In the same vein, keeping employees satisfied will also mean a greater likelihood of satisfied clients. Think of how pleasurable it is to do business with pleasant employees. Think of the employees’ contacts who may also bring you more business. Excellent management skills, and understanding how to satisfy clients, will grow your business rather than deplete it. When clients and/or employees feel used by your firm, you will be the one who ultimately suffers with business failure.

The Proposal and Agreement

Talking About Fees

There are many ways to set up fee schedules and these vary not only from region to region and firm to firm but project to project, so we do not propose to suggest fee scales here. A clear understanding of how these fees are set up, and their respective pros and cons, will be of vital to you. Study your options and know where you stand in the market in which you work.

When you are first meeting with a client it is important to bring up the subject of fees early in the conversation. This gets this possibly sticky subject out of the way, and with that understanding the project can proceed.

Writing the Proposal

After you have read an RFP (request for proposal), or met a client and gathered information, it will soon be time to write a proposal. This proposes the scope of the services you will provide for the project as well as the way the fee structure will work. When the proposal is in response to an RFP there may be certain guidelines for writing that proposal. When the proposal is written without an RFP the design firm will often have a variety of standards they use for proposal writing. The small firm will often write it based on the individual client and project, while the larger firm
Final Test

Tourist Information/Visitor Centre

NB: This project must be completed and submitted for assessment only after the Preliminary Project has been assessed and returned to you, and you have taken full note of any pertinent comments. This Final Test Project carries fully 25% of your course marks, so it is vital that you take the time and trouble to devote your very best efforts to it.

Introduction

The drawings show a three-floor stone building built towards the end of the 19th century and situated close to a town centre. For the purposes of this project you can select which town you wish to base your project on. The site has a driveway to one side which leads to a small car-parking area to the rear for staff and visitors. There is a considerable slope from the front to the back of the site which gives access to the ground floor at the front of the building and to the lower ground/basement floor at the rear. The building affords good views from the rear at ground and first floor level. (Known as the first and second floors respectively in some countries.)

The building has been stripped of much of its character over the years: the outside has been surfaced in smooth sand/cement render but the roof retains its grey slate finish. The simple timber framed, double-hung sash windows are the originals. Most of the original interior features (fireplaces, doors, skirtings [base boards], picture and dado rails, cornices, etc.) have been removed. The rather fine original timber staircase and simple dog-leg stair to the lower ground/basement floor were removed in the 1960’s and replaced with very plain precast concrete ones. At the same time much of the original timber ground floor was also replaced with precast concrete. More recent interior work has involved the installation of a lift (elevator) near the front entrance and the construction of a fire escape at the back of the building. Assume for this project that the lift/elevator is adequate for vertical wheelchair access and that the fire escape is suitable to satisfy fire escape legislation.

Generally speaking the thicker walls in the building are substantially load-bearing, so take care if you decide to open them up. Making openings larger than, say, 1.5m (5 feet) could have significant structural implications. Removing or making openings in the thinner walls represents little problem.

The building was originally a large town house but over the years has been used as offices and is currently a shop/advice centre selling fabrics and wallpaper. The ground and first (or first and second - see above) floors are mainly retail display with storage space and consultancy rooms. The lower ground/basement floor is mainly given over to storage plus a toilet/washroom area. Although the building has a rather anonymous feel to it, the basic original room proportions have been retained.

Part of your design challenge will involve deciding how you treat the existing building. You may wish to try to restore something of its original character, in which case you will need to do some research to find appropriate details for a building of this age pertaining to the geographical region in which you set your project. Alternatively you may feel that because the building has little of architectural/interior merit you can take a fairly radical approach in designing a modern, stylish interior.

Notice that the building is heated by radiators run from a boiler in the basement. Assume that the boiler will remain in its existing position and that the radiators will be replaced with new ones or with skirting convectors. There are many available styles of radiators and skirting convectors to chose from, illustrated in catalogues and trade literature. Assume that the replacement radiators will be of a similar length to those indicated on the existing drawings but feel free to change their position to suit your proposed room layouts.

As with the Preliminary Project concentrate your efforts on the design of the interior and assume any outside work will be the responsibility of other design professionals.
Design Process Notes

Before commencing the project, carefully re-read the Final Test Design Notes and Final Test Objectives.

Project Report

In addition to your project design work you are required to compile a ‘Project Report’ and submit this in your portfolio of work for assessment. The purpose of the report is to encourage you to think about the process of design activity you engage in whilst undertaking the project. It should be in A4 (or 8.5” x 11”) format and be sufficiently robust (avoid bindings that easily spring open). As a very approximate guide the report will probably be in the region of 1500 - 2500 words plus diagrams/illustrations.

The project notes have already emphasized that there is no ‘right’ or ‘wrong’ way of designing; you eventually have to evolve a system that works best for you as a creative person. Your project report will describe your design process whilst undertaking the project so whilst doing the work keep a logbook/diary that traces your activity. Be honest in keeping your diary: be prepared to record difficulties and frustrations as well as to acknowledge when things go smoothly. Include in your diary any cuttings, quotations or inspirational bits and pieces you collect as you work on the project.

Towards the end of the project compile an illustrated report in two sections:

SECTION 1 Research

This should include an account of both visual and practical research carried out in resolving the project and include:

- a description of your design solution and a brief explanation of your thinking behind it (a paragraph should be sufficient for this).
- ‘precedent studies’: examples of buildings, designs or artefacts that have been influential in shaping your design response. Remember to name the designer/architect/artist in each case whenever possible.
- accounts of any visits you may have made and meetings in order to clarify the brief, gather expert advice or view examples of good interiors/buildings.
- an account of any expressive work you may have engaged in to help you understand or appreciate the nature of the project/brief or to generate ideas for your initial concept.

SECTION 2 Process

This section will be a description of your design process based on information taken from your diary/logbook. It should present a coherent account of how you went about the project including difficulties and challenges and things learned in doing the work. Since much of your research is covered in Section 1 it is probable that Section 2 will largely describe the initial concept and concept development stages of the project. Include sketches and diagrams to help describe key stages.

a Initial Research

1 Think of a town you know, or know of, and do extensive research to find out about its history, geographical and architectural features, important figures, etc. (The Internet is ideal for such research.) Compile a list of the things you particularly feel make the town unique or give it character that might provide inspiration for design ideas then follow these up in a little more detail. Think about how some of these things could be translated into design ideas for the centre. In playing with ideas try to develop sophisticated and subtle notions that avoid obvious clichés. Sometimes it helps to abstract ideas (for example taking a piece of prominent architecture and concentrating on single aspects of it such as proportion/geometry, or colour/texture or playing with ideas for form by hugely
Samples of Former Rhodec Students’ Final Test Work

PLANS