

ID 317 Barrier-Free Design

Course Overview

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Most people, at some time in their lives, experience some degree of disability or reduced performance due to accident, disease, or ageing, which can temporarily or permanently prevent them from easily carrying out tasks which did not previously represent a challenge. From, ankle sprain, or a broken limb to potentially life threatening diseases, any of these may cause a change in lifestyle and ability. A small, but significant part of our population, because of inherited, or developed disabilities, will never have the opportunity to perform functions considered straightforward by all who are thought of as being "able bodied". Traditionally, the design and operation of the built environment did not require more than an intuitive understanding of disabilities and accessibility. Frequently, architecture goals, especially in public and monumental buildings, conflicted with ease of access and required people to follow the will of the architectural aesthetic. This traditional, heroic architecture, approach is no longer viable, the history of design has moved forward.

Yet barrier free design is not just performed to aid those with disabilities, although this is a legal requirement for all places of public accommodation. Barrier free design also makes life safer, simpler and more user friendly, requiring an 'inclusive' approach to design, where accessibility is the watchword. To interior designers, this type of thinking may appear obvious, but designers and operators of the built environment have only been forced to take this approach since 1992, when the Americans with Disabilities Act (of 1990) became effective. Prior to 1992, exclusivity, and life-safety requirements such as building construction codes, fire codes and security issues, which may require a 'separation' approach to design, were first-order mandates.

Safety and security requirements are as important as ever, but must now share the stage with federal mandates for an inclusive, accessible environment. This major change in thinking in the areas of building design, property management and business operation has not been achieved without controversy. Indeed, the concept of accessibility has been seen as an alien attack in some areas of the business world; barrier free design has also become a fertile area of growth for legal professionals and human/civil rights advocacy groups.

Successful barrier free design usually requires a clear idea of the balanced needs of the public, a knowledge of good design principles, a good understanding of building codes and an in-depth understanding of the ADA and applicable civil rights laws. Barrier free designers require a command of specialist design, legal, humanitarian thinking, general knowledge and will often need to adopt a systems approach to problem solving. The work and the duty of responsible designers is to make their best efforts to enable all people to live at their best and to reach their highest potential. Thoughtful, informed designers can help reduce the hazards of daily life by eliminating any barriers to performance presented by the built, or the administrative environment. For Interior Designers, it is an added duty to ensure that completed designs are not only functional and accessible, but also that they make good design sense and are aesthetically pleasing.

Barrier-Free Design requires an awareness of the materials, means and methods of creating barrier free interior environments and the access routes to them. In ID 317, commercial and residential barrier free needs and requirements will be examined. The 1990 Americans with Disabilities Act (ADA) will be studied to help give designers and title III of the ADA Accessibility Guidelines (ADAAGS) will be covered in some depth. An awareness of the spirit and letter of ADA legislation and a basic understanding of the nature of the bureaucratic machinery which has been assembled to administer and oversee the important and far-reaching ADA legislation will be attempted. Beyond the bureaucracy, a greater understanding of design universality 'Universal Design'; the barrier free needs of our population; and the many design considerations which help improve our practical living and working environment will be mentioned.

Study of this class, combined with wider reading of the subject, will give students a foundation in the design requirements and practical needs of barrier-free interior environments and the necessary and mandatory approach routes to them.

Instructor: Michael Colgan

Syllabus:

An understanding of Barrier-Free Design is essential for interior designers, architects, builders and managers of human resources and property. Mandates for barrier-free surroundings became law in 1990, when President Bush signed the Americans with Disabilities Act (ADA), which became an enforceable reality in 1992. Since then, the growth in accessible environments has increased exponentially along with a growth in law suits and sanctions for non-compliance. Non-compliance penalties are becoming increasingly frequent and severe. Inaction on the ADA is not an option. The importance of the ADA is indicated by its direct Federal Government oversight. Federal regulation sometimes increases the complexity and the potential for litigation and confusion (witness the tax code). However, ADA legislation is also the engine which has driven a boom in barrier-free design services. The required mixture of technical, legislative and creative design knowledge makes barrier-free design a fast-paced and professionally demanding sub-specialty of interior design. But of greater importance, the ADA has increased the ratio of persons with disabilities who can enjoy the blessings of modern life, while making a positive contribution to society.

Understanding ergonomic and anthropometric basics and universal design concepts also helps interior designers become better barrier-free designers. Ideas, information and design skills help in the avoidance or mitigation of the potentially disastrous and expensive consequences of misunderstanding ADA rules and barrier free needs.

Intent:

The intent of this class is to provide an overview of the design requirements and legislative mandates which cover this part of interior design. The class will provide an overall appreciation and understanding of barrier-free design and the methods, materials and compliance mandates which must be addressed by interior designers. The need for creativity and good aesthetic design amid increased regulation will not be forgotten.

Structure:

The class will be comprised of a mixture of lectures, discussions, class study and project work. Occasional guest speaker forums may be used when possible and appropriate. There will be two short field trips to nearby locations. Students may also need to visit additional locations in their own time. Students will use critical observation as well as individual and team techniques to evaluate and report on existing designs and discuss potential improvements in the light of advancing knowledge. Class hours will be devoted to lectures, study forums and analysis. Homework will require critical observation, background reading, including the coursebook, the ADAAGS and the Code of Federal Regulations 28 CFR part 36. Thorough preparation for class contributions and individual coursework will be required. An individual and a team research topic will be assigned. Internet research, analysis and reporting is required. Individual and teamwork projects will involve finding, photographing, design, basic legislative analysis and site reporting.

Learning Goals & Professional development:

This class will provide essential information for the understanding of current Barrier free needs, research methods and promotes modern ways of thinking about the designed environment. Drafting and design skills will be brought into use during this course. The class covers part of the material found also in the building and barrier free section of the NCIDQ examination for professional designers.

Evaluations & Attendance:

Attendance is mandatory, more than 2 - unexcused absences can result in grade reductions or lead to a failing score. Coursework will comprise 60% of overall grade, 30% will be by written examination, 10% attendance and class/team participation. All sections must be passed to aggregate a final grade. Absence, lateness or missed deadlines attach penalties.

Barrier-Free Design

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Proposed Syllabus. Homework & Coursework

**Grade Marking: A 100-91%, B 90-81, C 80-71, D 70-61,
Attendance 10%, mid-term exam 10%, final exam 20%,
coursework 60% (cw1, 2, 3, 4, are 5% ea. 5 is 15% & 6 is 25%)
two 4 page essays or a Service Learning activity are also required.**

Course Book: Beautiful Barrier Free, a visual guide to accessibility, by Cynthia Leibrock

Additional texts (available at no charge via class loan or by student action) :

- i) the Americans with Disabilities Accessibility Guidelines (ADAAGS)**
- ii) Department of Justice Code of Federal Regulations 28 CFR Part 36**

week 1	Introduction to barrier free design; Ethics, Legislation cw 1-6.	HW. cw 1, read pref., BBF ch. 1, 9, CFR 467 - 489
week 2	ADA Civil Rights, Parking & Ramps cw #2; Field trip #1 cw 1 due b-4 on-campus field trip (5%), wheelchair demo. trigonometry and barrier free design.	HW. cw 2, read BBF ch. 6, 8 & CFR 489- 522
week 3	Entries, passageways & doors; Bathrooms & toilets cw 2 due on wk 2, class 2 (5%), proxemics, discussion on matters on ADA law and its affect on design.	HW. cw 3, read BBF ch 3, 4, 5 & CFR 527 - 557
week 4	Elevators, stairs, railings; Student PRESENTATIONS	HW. read BBB ch. 6, 7 & CFR 523 -7 & 623-635
week 5	Anthropometrics, ergonomics, Universal design; Field trip #2 Guest speaker; cw 3 due (5%) Field trip, Location TBA	HW. cw 4, read BBF ch 2, 7 & CFR pp 623 - 635
week 6	ADAAGS, UFAS, CFR, FHA ; Disability & Accessibility classwork essay #1 due , discussion on technology transfer	HW. review BBF, read CFR 635 - 642
week 7	Review of concepts & specifics; MID TERM EXAM (10%)	HW. Individual & team research
week 8	Building codes, fire safety, ADAAGS; Projects 1 & 2 assigned cw 4 due wk 8, beginning of class 2.	HW. Design project #1 (cw 5)
week 9	Designing for peoples' lives; Barriers to barrier free design building codes, including NCIDQ concepts.	HW. Design project #2 , ADAAGS
week 10	Fair Housing Act requirements; codes & ADAAGS classwork essay #2 due, universal design discussion	HW. Design & research projects, ADAAGS
week 11	Design practice w/ universal design approach; Vets Day	HW. Research & field work
week 12	Design project #1 ADAAGS; (cw 5) PRESENTATIONS cw 5 due wk 12, class 2 (15%)	HW. Project work
week 13	Design practice; Thanksgiving	HW. project & team research work
week 14	Review of class & coursework; Special topics	Web research summaries
week 15	Project cw # 6 (25%) PRESENTATIONS; Final review	HW. Prepare for final exam
week 16	FINAL EXAMINATION (20%)	