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Wood-working Curriculum Proposal

Thomas Lacagnina

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Thesis Proposal for the Master of Fine Arts Degree

College of Fine and Applied Arts
Rochester Institute of Technology

Title: Wood-working Curriculum Proposal

Submitted by: Thomas Lacagnina

Date: May 10, 1974

Thesis Committee:

Chief Advisor: William Keyser
Associate Advisor: Ed Miller

Departmental Approval: 1. William A. Keyser

Date: June 6, 1974

2. _____

Date: _____

Approval, Chairman of the Graduate Program: _____

Date: _____

Final Committee Decision: _____

Date: _____

Wood-Working Curriculum Proposal

Preface

Alfred University has employed a two-year "foundation" program in teaching its art students for several years. My experience in this program has led me to formulate this proposal for an overall wood-working (four-year) curriculum. Let me stress now that while the proposal has many features in common with programs I have seen, in its entirety it is offered as my own statement.

I would like to thank especially, my thesis advisors Bill Keyser and Ed Miller of R. I. T., who have read this proposal and advised me about it.

As a preliminary document I here introduce a curricular statement from the Alfred University Art Division regarding its program. (It should be noted that Alfred University does not offer a major in wood-working.)

INTRODUCTION

This proposal for a new curriculum for the BFA Degree Program does not present a radical change in either purpose or content of our present offerings. Rather, it attempts a greater flexibility and diversity of study and a closer student-teacher involvement.

It is built with the three credit hour unit as an integral building block in which three credit hours equals three lecture hours equals six studio hours scheduled in any one eight hour day.

It clearly establishes the maximum semester load and defines the minimum requirements for the BFA Degree and offers a range of options within these limits.

Further it spreads and more evenly balances studio and lecture study throughout the four years.

PART I

FOUNDATION STUDY (first four semesters)

1) The Foundation Program is a collective effort of students and faculty which provides a synthesis of the old discreet studio disciplines in a four-semester sequence culminating in a final overall evaluation. It is directed by two core groups of faculty coordinated by the Foundation Chairman, each guiding and evaluating (as a group) foundation work.

2) The first 3 semesters allow the student a period of investigation and experimentation in the diverse concepts and processes of visually creative action. A significant portion of the fourth semester of the Foundation Term is given to the student to explore individual concepts that have come from his previous foundation experience.

3) The fourth-semester review and evaluation phase of the Foundation Program consists of an individual presentation to the Art Department faculty of works that embody the foundation experience.

Coordinated by the Foundation Chairman, the following will be determined from the review:

- a) Overall evaluation of foundation work.
- b) Qualification for advanced study.
- c) Selection of advisor for advanced study.
- 4) Four semesters of either PE or ROTC are required and credit earned recorded for the records but not considered as part of degree requirements.

ADVANCED STUDY

Once the evaluation of the qualifications for advanced study has been determined by student and staff, upper level work goes forward on an individual advisor-advisee basis under the coordination of the Advanced Studies Chairman. A teacher guides and advises a student through his Junior-Senior years, but his work is evaluated by a team of those teachers working in his area. During his final year each student must mount an exhibition of his work for faculty approval and degree candidacy.

Student and advisor map out a program of advanced study suited to the interests and talents of the individual involved. Various interests and talents set various balances of studio and lecture study ranging between 87 to 63 studio hours balanced by 42 to 66 lecture hours.

The flexibility of the program is designed to allow students to realize various individual objectives, including preparation for

graduate study in the visual arts, preparation for art teaching in the secondary schools as well as a generalized education centered in the studio but allowing for the development of interests in any of the fields of theatre, music, art history, science and the humanities.

Wood-Working Curriculum Proposal

About The Proposal

There are many ways to approach the teaching of wood-working, or any craft; any philosophical stance must be flexible enough to suit the needs and limitations of real students working in actual buildings with given tools and time periods. The program presented here is based upon a two-year "foundation" in which the student's total perceptual awareness grows and focusses. Following this are two years of major study in wood-working. These two program elements are formulated and discussed.

The basis for this discussion is three-fold. Documents from various woodworking programs have been examined, and some features have been incorporated. Especially useful were suggestions in a furniture program outline received from my teacher and friend, Wendell Castle. My teaching experience in the past three years at the New York State College of Ceramics at Alfred University, and during the summer of 1973 at California College of Arts and Crafts, along with my experience as a student at Rochester Institute of Technology, constitutes the main basis for my views on teaching of wood-working. At Alfred University, for two years now, I have participated in teaching the first year of a foundation type program. Finally, John Dewey's well-known little essay, "The Child and The Curriculum" has provided a theoretical framework for these views.

Curricular Philosophy

The proposed Curriculum has a "liberal" rather than a "vocational" orientation. My experience has convinced me that this kind of program can offer more in terms of general education and personal growth both to the student and to the teacher; in any case, it represents the direction my interests have taken. In times of great uncertainty in the job market, such as we now have, this kind of program has a greater chance of attracting students and preparing them for life in the modern world, rather than training them for specific vocations.

Thus, the program adopts a broad conceptual perspective, attempts to educate and direct the student's developing sensibilities, imagination, sense of discovery and control. It tries to do more than communicate a "correct" sense of design through criticizing solutions to design problems. Rather, it encourages the student to open his mind and his senses to new attitudes and possibilities. Learning of specific skills and techniques should contribute to his developing total art sense.

The student's discovery of his abilities in learning specific skills which he needs to continue his own work is the key to motivation, energetic and self-disciplined progress, and the development of a total sense of craft rather than a repertoire of disconnected specific techniques. In this view learning is active and personal.

Assimilation of particular, narrow or rigid, skills through their repeated performance in isolation is avoided. Educators today are increasingly concerned over students' inability to transfer skill or knowledge learnt piecemeal to new or general contexts - a problem which is aggravated when skills are developed in isolation. Perhaps more serious is the psychological effect of an undue emphasis on practicing and repeating specific skills - loss of appreciation of the overall creative enterprise, developing tendencies toward stylization, rigidity and safety. Wendell Castle makes a similar point:

It is impossible for a student who has been given a thorough indoctrination in the techniques of a given material to ever be free from that material. He has been told too many times what the material will and will not do. This leaves open only a very limited field of discovery. (from his curriculum outline)

The student who takes shelter in the mastery of specific skills may appear at first as a promising craftsman, but is soon overtaken by other students whose development has been broader and freer. The security of the narrow skill prevents him from venturing onto the thin ice of innovation and experimentation where so little is understood at first. He takes no risks; he learns no more.

This program, then, attempts to inculcate and communicate a general sense of materials, a general sense of using tools, a general sense of design. The student uses and develops these in his own discoveries and creative decisions, monitored by his teachers - who

must frequently push, support, and guide him.

Foundation Program

The student's first two years are occupied in a foundation program and coordinate art-craft history and philosophy program, and elective courses in liberal arts. During this time the student should develop and broaden his commitment and perspective and should participate in a variety of experiences in the arts. Toward the end of this foundation period, he should begin to focus on the studio areas to be pursued in major study afterwards.

The foundation program is divided into first - and second - year groups, each taught by a team of faculty from different design areas. It is highly informal, not divided into credit-fractions, but conducted as an integrated continuous activity over the whole year. This involves a commitment, a mutual trust, and a willingness to learn on the part of students and faculty alike (and on the part of the institution). This format affords the possibility of various faculty observing individual students in various situations, so that attention can be addressed to their individual needs. A student can more readily proceed in his own way at his own pace. Special problems, indications for personal challenge or support, or remedial activities can be discussed by participating faculty and solutions tailored for each student. The program is flexible enough to accommodate special events, trips, shows, etc., planned and spontaneous. The oppression of

rigid scheduling is escaped; momentum once generated can be maintained.

Year I

The group meets every morning in a large open area. Faculty may make a short presentation - describing a problem, discussing a technique, showing work, slides, or films, etc. The students work variously in groups or individually at their tasks. Teachers mingle with students, advising, criticizing, helping, observing.

Many activities are encouraged. Drawing, design problems, and figure drawing are frequently assigned. Students of various backgrounds may approach a given exercise by making a careful water-color, by sewing a stuffed form, or by heaping dirt into a corner. Students of differing attitudes, levels of sophistication, and motivation - just as they arrive - are thrown together to work with and learn from each other. Especially in their initial experiences, students must feel some sense of success; beginning problems should generate enthusiasm and confidence; early criticisms should be tempered by this consideration. We avoid feelings of competition, stratification, and especially preciousness, substituting instead a sense of personal growth.

This first foundation year is a time to break down students' "arty" preconceptions, to open them up, to develop a total awareness.

Use of the word "art" should be minimized. Specific problems should be assigned with this overall goal in mind - the point is to turn students around, make them see anew, perhaps to contribute to a growing vocabulary of ideas and techniques, but not to prolong dependence on some specific ideas and techniques. There should be a rhythm in the working time. Today we do figure drawing, emphasizing skill, care, development of the disciplined eye, focussing on a public, given thing (which is, importantly enough, a person). Tomorrow, or days later, or even later this morning, we fool around - do not be misled - with some paper, folding it, crumpling it, observing what happens to it. The tasks assigned should be approachable on many levels, from many points of view. Gesture drawing, drawing from the imagination may provide insight into pure forms, volumes, movements, light, color. Various design problems relate form and function. Analytical and perspective drawing require more discipline, attention to detail, objective "correctness". The students and teachers move from day to day, and place to place through these various tasks, coming to know and learn from themselves and each other.

Two or three times in the year students set out work for their teachers to critique. The faculty team takes a couple of days to walk around together, observing and discussing this work with students. Thus we carefully but firmly introduce the need for criticism, the develop-

ment of a critical sense, and underline the feeling that faculty are looking at each student's progress. Frequently a variety of faculty opinions, some in conflict, will emerge. When the discussion is "out front" the students perceive the variety of ways to "take" and think about art.

Following are example problems which might be assigned in the first - year foundation group. They invite solutions on different levels, with room for a variety of sensibilities and styles. These problems are illustrated by slides. (See Appendix.)

The first problem is the activation of an enclosed space. The group tours a building, taking inventory of its usable spaces-rooms, hallways, elevators, etc. Students working singly or in groups - may arrange furniture, place barriers, hang paper or string, lay down colored paper lines to manipulate patterns of movement within these spaces. A large weather balloon could be inflated to fill one end of a hallway. Depending on available facilities, this could be followed by connecting some of these spaces using video, telephones, radio, string-and-cup. The problem encourages students to explore large spaces from inside, to notice their contours, and to manipulate them in some way.

Another problem has two parts. Each student must construct a 6" cube, solidly and accurately, from illustration board. Very likely, several students will not perform this task with adequate care, and will

be directed to do it again. The exercise is simple, but demands attention to detail, both in design and execution. Now students must color the cubes with acrylic paint in order to camouflage them, and must then place them outdoors, without actually covering them. When this problem was assigned to our group at Alfred, the cubes were hidden in a two hundred yard strip of bush and creek behind our building; the teaching team then searched and were hard pressed to locate them all. The second part requires students to research the problem of camouflage, find solutions for the particular locale, mix and apply paint, and place the cubes with inventiveness and wit. Besides, everyone has a good time.

A third problem is a paper-folding exercise. In a brief presentation the modest tensile strength of paper is contrasted with its considerable compressive strength against the plane, and the reinforcing effect of folding is demonstrated. Paper is perhaps crumpled, then examined for the various folds produced. No definite problem is assigned - students are "turned loose" with the paper. The object is for the student to discover for himself some of the possibilities, working in a relaxed way with familiar materials. If the students are presented initially with a vocabulary of folds, they can at best acquire some techniques. But, this problem aims to stimulate their sensibilities and sense of discovery - which are surely more germane for their developing creative abilities.

Finally, a further problem in folding paper. The student attempts to design and build a paper structure which will hold him on water for 60 seconds, using only paper (and perhaps glue). This problem contrasts with the previous one; it has a specific objective which entails ingenuity in design, consideration of structure and material in relationship to function, and care in construction. Students at Alfred University submitted many different "paper boats" - only one actually succeeded in carrying the builder in water for the 60 second period. However, everyone was able to discover much about the structural properties of paper, and again everyone had a fine time.

Year II

In the first semester students rotate in sub-groups through a series of two - or three-week projects in different areas: sculpture, weaving, drawing, painting, wood-working, printing, jewelry making, or what have you. Each of these is directed by a teacher in that area who belongs to the faculty team. At the end of each project there is a critique, perhaps involving the project instructor, an "outside" teacher, the project sub-group, other students. Occasionally the whole second year foundation group will meet for figure drawing, for a special presentation (lecture, film, slides, etc.), or perhaps to discuss group problems or special projects.

Now activity is more concentrated, more continuous, as students pursue the techniques and possibilities of one discipline for the two-or-three-week period. The projects are more skill-oriented and are more critically analysed. Detail and finish are emphasized. Students are learning the hard facts about tools and materials, mastering specific techniques. They are not yet striving for self-expression, but are getting into the rudiments of a craft. Over the semester each student has enough experience with several studio areas that he can begin to focus his interest towards one or two of them.

We are effecting a transition from the open spontaneous rhythmic first year to the discipline of the shop and studio. We must continue to emphasize integration, discovery, development of overall sensibility and confidence; art is still fun.

During the second semester students work continuously in major and minor areas under faculty advisers. They are now attempting real studio work, which is reviewed every three or four weeks by faculty of the students' choosing: This is a miniature of the junior year. During this second semester the entire group continues to meet occasionally for discussion, for special presentations, and for figure drawing. The whole foundation experience ends with a comprehensive group critique.

Now we examine a couple of projects from the first-semester rotation. One is in sculpture; modules of welded steel, clay, wood, etc. are assembled into "serial structures". The student encounters practical problems in the repetition of modules, and develops some understanding of the material, some techniques, and some sense of discipline. He approaches an overall design problem analytically, as a synthesis of disparate similar parts. The serial concept is discussed by the group at the start, and again after several structures have been completed; all projects are analyzed - both practically and aesthetically - in a formal group critique. The Alfred University sophomore class took various approaches to this problem. One student cast plaster modules; another used painted lathing strips placed on a hillside to accent the notion of interval.

Another project involves the study of geometric perspective in line etching. Students are introduced to the etching process; preparation of the zinc plate, beveling, polishing, cleaning, use of grounds, biting, inking, printing, presentation of the print. Each student may develop two or three plates around 8" x 10" and pull an edition of six prints from one plate. The final critique addresses both technical and creative aspects of the problem.

Concurrent with the foundation class students take courses in liberal arts and participate in a coordinate program in art history and philosophy. Classes meet regularly for instruction in the history

of the arts and crafts, including the contemporary scene. There are also invited lectures and demonstrations, shows, films, slide presentations, field trips to galleries in New York, parties, discussions, and other special events. The students become a part of the art community.

Wood-Working Program

We approach wood-working from the point of view of looking at the product - an object in space. Does it deal with volume, line, texture, color? Does it deal with structure and function? Are we designing or stylizing?

To build this object of wood we must learn how to cut, shape, possibly fit pieces of wood together. Thus we must assemble a repertoire of wood-working techniques. But we can get lost in technique; as much as possible we want the feeling that technique serves our projects. As they are developing specific skills, the students should be groping with design ideas, not preoccupied with the Dovetail Joint. Of course, the student must simultaneously develop a sense of craftsmanship, a pride in finished work.

The students begin by assembling objects which involve a minimum level of technical skill; with further handling of materials these skills will grow naturally. The students must develop also a familiarity with three-dimensional design.

Drawings are continually emphasized, including figure drawing. A sense of volume, structure, scale, proportion can come out of drawing. We continue to explore color and texture, which are important variables in selecting woods and other materials to combine in an object.

As much as possible, and especially after the first semester of this two year program, students make their own choices in the work, guided by the teacher, who must be aware of each student's special needs and limitations. When the project is the student's own idea, internalization of needed skills and thoughtfulness in design are enhanced. The student has a verbal contract with the teacher, and within its terms he takes responsibility for his own progress and for the quality of his finished work. This design and execution become truly his problems, important to him.

Year I

Most straightforward mechanical skills are introduced and practiced to such a degree that the student can thereafter progress further on his own. He learns first how to plan his work through drawing and modeling, how to select materials economically and with some feeling for their aesthetic properties. He learns how to use most hand tools. In a preliminary project, he hand cuts pieces of poplar and hand planes them square, then cuts samples of the following joints: through dovetail, halfblind dovetail, box joint, lap joint,

finger joint, through mortise and tenon, through pin tenon. Now a strange thing occurs; initially it is very difficult for the student to plane wood by hand but once it is done the student has crossed an important bridge and somehow becomes more adept with all hand tools. During the planing at the start of this project the student learns to sharpen planes and chisels with grinder and hand stone; the benefits of hollow grinding are remarked.

This initial project and the two others in the first semester are adopted from a syllabus for a course in wood-working and furniture design by William Keyser of Rochester Institute of Technology.

Next we undertake a complete construction. The student selects some small object and design and builds a container for it, employing machines and laminating techniques, but no joinery.* Naturally, he must draw and model the container first and discuss his design with the teacher. Construction is also discussed and organized. Now the class can be led through a series of demonstrations and encounters with the necessary machines. First the radial arm saw - the teacher gives a demonstration and lecture and each student reads the instruction book ("Getting The Most Out of Your Radial Arm Saw" by Delta Rockwell Mfg. Co., 1937).** The students then proceed in turn to use the saw to

* We discourage reliance on joinery now both in order to prevent students from becoming dependent upon it (see p. 3 above) and in order to promote thinking in other directions.

** Rockwell publishes a series of these booklets for its various machines; they contain a wealth of information, and students read each one prior to first use of a machine.

cut materials to length. Next, the whole procedure is repeated at the jointer, where one side of the material is surfaced flat. Then we move to the thickness planer, then back to the jointer, then to the table saw. There follows a session on gluing and clamping, then one on carving. Finally, the containers are finished with #220 sandpaper and oil. This demonstration - then - use procedure with a large group (even, say fifteen students) results in repeated bottle-necks at each machine, but this can hardly be avoided, and anyway represents a real shop problem which the student may as well discover early. Discipline and patience are virtues throughout the building process and should be developed from the start.

The next project is the design and turning of a mallet. After drawings have been completed and examined, the teacher again gives a lecture-demonstration at the wood lathe - inboard and outboard face-plate turning and spindle turning. This requires similar encounters with the drill-press and band-saw.

When this project is complete, the student has used every major wood-working machine, has learnt the procedures of drawing and modeling, truing work, gluing, finishing, etc. Hand tools have become familiar. Several joints have been accomplished. He is ready to go on to structural problems.

In the second semester two projects are assigned. They may

be described in presentation so as to avoid the usual connotations that go with words; thus we may assign the design and construction of an object to support the seated body approximately twelve inches from the floor, avoiding the word "stool". The second project is a table of some sort, and may be similarly described in a neutral way. The teacher works closely with individual students, who proceed with their own work at their own level and pace. New techniques, materials, ideas can be introduced and learnt as the need arises. Students can be guided toward strengthening weak points. The work and learning are personal.

Year II

In their final year students work on projects of their own choice and design, nearly on their own. Self-expression begins. By this time the student should have developed an overall approach to the craft and a repertoire of skills sufficient to enable him to grow as a craftsman. Following are described some projects actually carried out by my students at Alfred University; these are illustrated by slides.(See Appendix.)

One student designed a coffee table, the top of which is a terrarium made of two rectangular glass sheets, the bottom sheet slumped to contain the growing space, the sheets held in a wood frame placed on simple heavy wood legs. The idea seemed especially appropriate here, in a rural setting where mosses and ferns grow on

the wooded hillsides and where glass, wood-working and other crafts and arts proceed side-by-side. We reviewed several possibilities in the design - the student's decision on the placement of the legs seemed wrong to me, and I discussed this with him, but finally the decision was his. Aside from this design fault, I consider the piece to be successful. Naturally, the student encountered many problems and learnt and grew in its construction.

A graduate student in glass came to me with some sketches of a table. The sketches were vague, but I felt that there was significant potential, so I asked her to make further sketches, elevation drawings, clay models. When she was still unable to capture her idea, I assigned styrofoam lamination and carving of a full-size model. This was still unsuccessful - stiff, vertical, whereas her concept was amorphic, pushing forward. So she made more styrofoam models, gained confidence, and finally produced a successful model, which she carefully cut into 2" cross-sections to be used as templates in later cutting, stacking and laminating of wood. Some of her carving was done rapidly with the electric chain-saw. The final piece was successfully constructed in about two weeks. The lengthy preparations were seen to have paid off!

A student came up with an idea involving a very angular configuration for a table. In the early drawings the angularity of the piece was contradicted by the soft, traditional, turned legs: This was pointed

out and discussed, and the student gave a lot of thought to an alternative more consistent with his overall idea. A successful resolution was achieved in a sled-like base. (The runners, however, should have been more massive, like the top.)

In all student projects design is discussed critically, weaknesses are pointed out in the drawing stage and alternatives are sought. Decisions are finally the student's. I find that I can draw out their sensibilities while maintaining enthusiasm by advising, suggesting, guiding, preserving the students sense of personal achievement.

Facilities

We have a bench room containing benches (preferably one assigned to each wood-working major, with some extras for occasional students) and hand-tools. This room is always open. Attached to each bench is a locked cabinet where each student keeps his tools. The hand tools checked out permanently to each student are specified on the S.A.C. list, which follows.

There is a machine room where students work only under direct supervision of the teacher, assistant, or technician. Here are all power machines, portable and stationary:

- 10" grinder
- 12" radial arm saw
- 12" jointer
- 12" planer
- 20" band saw

SAC WOODWORKING & FURNITURE DESIGN

TOOLS CHECKED "OUT" ISSUED TO UNDERSIGNED

OUT	IN		OUT	IN	
_____	_____	Awl, Brad 1.05	_____	_____	Square, framing 6.75
_____	_____	Awl, Scratch 1.70	_____	_____	Rasp 4.95
_____	_____	(2) Bench Pins 3.50	_____	_____	File, cabinet 4.85
_____	_____	Bevel 4.05	_____	_____	File card 2.90
_____	_____	Brace 16.30	_____	_____	File, Mill Bastard 1.20
_____	_____	Burnisher 3.75	_____	_____	(2) Marking gauges 3.85
_____	_____	Chisel 1/8 4.25	_____	_____	Nipper, end 4.25
_____	_____	Chisel 1/4 5.25	_____	_____	Oil can .75
_____	_____	Chisel 3/8 5.35	_____	_____	Oil Stone, crystolon 3.40
_____	_____	Chisel 1/2 5.40	_____	_____	Oil Stone, arkansas 16.40
_____	_____	Chisel 5/8 5.55	_____	_____	Oil Stone, Gouge slip 3.05
_____	_____	Chisel 3/4 6.25	_____	_____	Plane, block 7.40
_____	_____	Chisel 1" 6.50	_____	_____	Plane, Smooth 10.35
_____	_____	Chisel 1 1/4 7.35	_____	_____	Plane, Jack 11.25
_____	_____	Chisel 1 1/2 7.50	_____	_____	Plane, Jointer 20.95
_____	_____	Cresent wrench 2.90	_____	_____	Rule 2 ft. 6.60
_____	_____	Countersink 1.80	_____	_____	Saw, back 6.90
_____	_____	Dividers 5.25	_____	_____	Saw, crosscut 8.55
_____	_____	Drill bit set 7.90	_____	_____	Saw, dovetail 4.60
_____	_____	Drill, hand 11.80	_____	_____	surform handle 3.15
_____	_____	Hammer, lg. 4.70	_____	_____	Surform handle (Rd) 2.70
_____	_____	Hammer, sm. 4.70	_____	_____	3 Surform blades 1.35 ea
_____	_____	Knife, Sloyd 1.95	_____	_____	Glue dispenser .45
_____	_____	Spoke Shave 3.60	_____	_____	Pliers 2.30
_____	_____	Square, Comb. 5.05	_____	_____	Sanding block, cork .55
_____	_____	Scraper, cabinet 5.85	_____	_____	Scraper blade 1.05
_____	_____	Screwdriver 3" 1.40	_____	_____	Scraper, swan neck 1.25
_____	_____	Screwdriver 4" 1.50	_____	_____	
_____	_____	Screwdriver 6" 1.75	_____	_____	

12" table saw
1/2" standard floor mounted drill press
12" disc sander
6" belt sander
12" diameter x 30" long bed wood lathe
5 or 10 h. p. air compressor (for the introduction
of portable air tools later on).
8" portable circular saw
2 ea. 1/4" to 1/2" routers
2 ea. 3/8" electric drills
portable sabre saw
portable electric plane
portable sanders

(And perhaps others, such as electric chain saw, oscillating spindle sander, mortising machine (hollow chisel), uniplane, horizontal boring machine (multiple spindle), panel sander, shaper, buffer, panel saw, jigsaw).

A third area is the wood storage room, under the supervision of a technician or assistant, where students may obtain wood materials conveniently and as cheaply as possible. The radial arm saw can be kept here.

Arrangement of machines is important for minimizing transportation of work. (See shop drawings following.) The machines are so placed that the normal progression from jointer to planer to table saw is easy and quick.

It is extremely desirable to have a full-time technician who can dispense hand tools and portable power tools, supervise use and maintenance of power machines, dispense materials and supplies, etc. This technician has a small "cage" office located so that it opens onto

the shop from one side and onto the outside hallway from another side. (See drawings following.) From this "cage" he can control all power machines through secondary switches and a master switch, can check out tools both to students in the shop and to others (who needn't interrupt by going through the shop), can keep records of tools checked out and of students' use of machines, etc. Such an arrangement will free the teacher to be involved with individual students more frequently, and will allow for greater "service" activities for the whole school.

Applications

An informal survey of art and craft programs at a few institutions across the United States reveals that the foundation approach to art curricula has taken hold. We at Alfred University have been teaching freshman and sophomore foundation for about five years. In its statement on educational philosophy, The Rhode Island School of Design, stresses the need for graduating artists "in a larger sense" who have developed broadly through a liberal curriculum with first year foundation study. The University of New Hampshire art program emphasizes integration of the various arts and employs a foundation approach. California College of Arts and Crafts reserves major study for the last two years and introduces students to the arts in a one-year "basic studies" course. Foundation programs can be found also, at Virginia Commonwealth University and at the Philadelphia College of Art.

Underpinnings

His short essay "The Child and The Curriculum" is one of John Dewey's best known statements of educational philosophy. It is addressed to the problems of elementary education, but has much wider application. By looking at the successful teaching of children and its principles we are likely to discover how to teach college students and even adults.

Dewey insists that education should be set into a "real" context; its subjects and problems must meet the child's self-perceived needs. Facts and principles cannot be "torn away from their original place in experience", as when they are presented abstractly and piecemeal.*

Dewey says:

'Tis an old story that through custom we finally embracé what at first wore a hideous mien. Unpleasant, because meaningless, activities may get agreeable if long enough persisted in. It is possible for the mind to develop interest in a routine or mechanical procedure, if conditions are continually supplied which demand that mode of operation and preclude any other sort. I frequently hear dulling devices and empty exercises defended and extolled because "the children take such an 'interest' in them."

*"The Child and The Curriculum" in Dewey on Education ed. M.S. Dworkin (Columbia University, 1959); see p. 93. (Further references in the text are to this essay.)

Yes, that is the worst of it; the mind, shut out from worthy employ and missing the taste of adequate performance, comes down to the level of that which is left to it to know and do, and perforce takes an interest in a cabined and cramped experience.

(We are reminded here of the statement quoted from Wendell Castle earlier; see p. 3 above.)

The remedy is simple and yet in today's educational world apparently difficult to effect. Education must be active, fun, personally meaningful and satisfying, both for the student and teacher!

Again Dewey says:

Learning is active. It involves reaching out of the mind. It involves organic assimilation starting from within. Literally, we must take our stand with the child and our departure from him. It is he and not the subject-matter which determines both quality and quantity of learning.

Warning against a merely formal, and perhaps uninformed and unrestrained reaction to "old education", Dewey stresses that the teacher retains an important directive role; it's the point of that direction which must be rethought, as well as its form. "Guidance is not external imposition. It is freeing the life-process for its own most adequate fulfillment." (P. 101, italics in original.) This is the basis of our program.

Appendix

In thinking about this statement, I was pleased to consult curricula outlines from Wendell Castle, William Keyser, and Donald McKinley. Several art school catalogs were reviewed also.

Slides

- 1-3. Space activation (Alfred University freshman foundation class 1973-74).
- 4-5. Cube construction (Alfred University freshman foundation class 1973-74).
- 6-10. Camouflaged cubes in position (Alfred University freshman foundation class 1973-74).
- 11-13. Paper-folding (Alfred University freshman foundation class 1973-74).
- 14-15. Paper boats (Alfred University freshman foundation class 1973-74).
- 16-17. Table with sled base (Alfred University graduate student 1973-74).
- 18. Terrarium table (Alfred University undergraduate student 1973-74).
- 19-20. Glass-topped table (Alfred University graduate student 1973-74).

Legend

- #1 Benches
- #2 Panel Saw
- #3 Plywood Storage
- #4 Radial Arm Saw
- #5 Jointers
- #6 Thickness Planer
- #7 Table Saw
- #8 Band Saw
- #9 Lathe
- #10 Drill Press
- #11 Mortising Machine
- #12 Shaper
- #13 Belt Sander
- #14 Disc Sander
- #15 Oscillating Spindle Sander
- #16 Uniplane
- #17 Jig Saw
- #18 Grinder Buffer

Schedule

Although the curriculum described here is presented as a proposal, to be modified and shaped as necessary in practice, it may be useful to outline a possible schedule in which it could be implemented.

In the two foundation years, students meet with their faculty teams every weekday (freshmen mornings, sophomores afternoons). Naturally, work on the various projects goes on continually. The informality and flexibility of this program has already been stressed.

In the two years of major study in wood-working, students have access to the shop all day every weekday, and are scheduled to be there at two or three specific hours every week for lectures or demonstrations.

The wood-working teacher, then, who we will assume works three days formally, is assigned to a foundation team in the mornings and conducts classes in the shop in the afternoons. His colleagues, assistants, and technicians manage to keep the shop open and functioning during the other afternoons and mornings.

The student's four-year program might look like this:

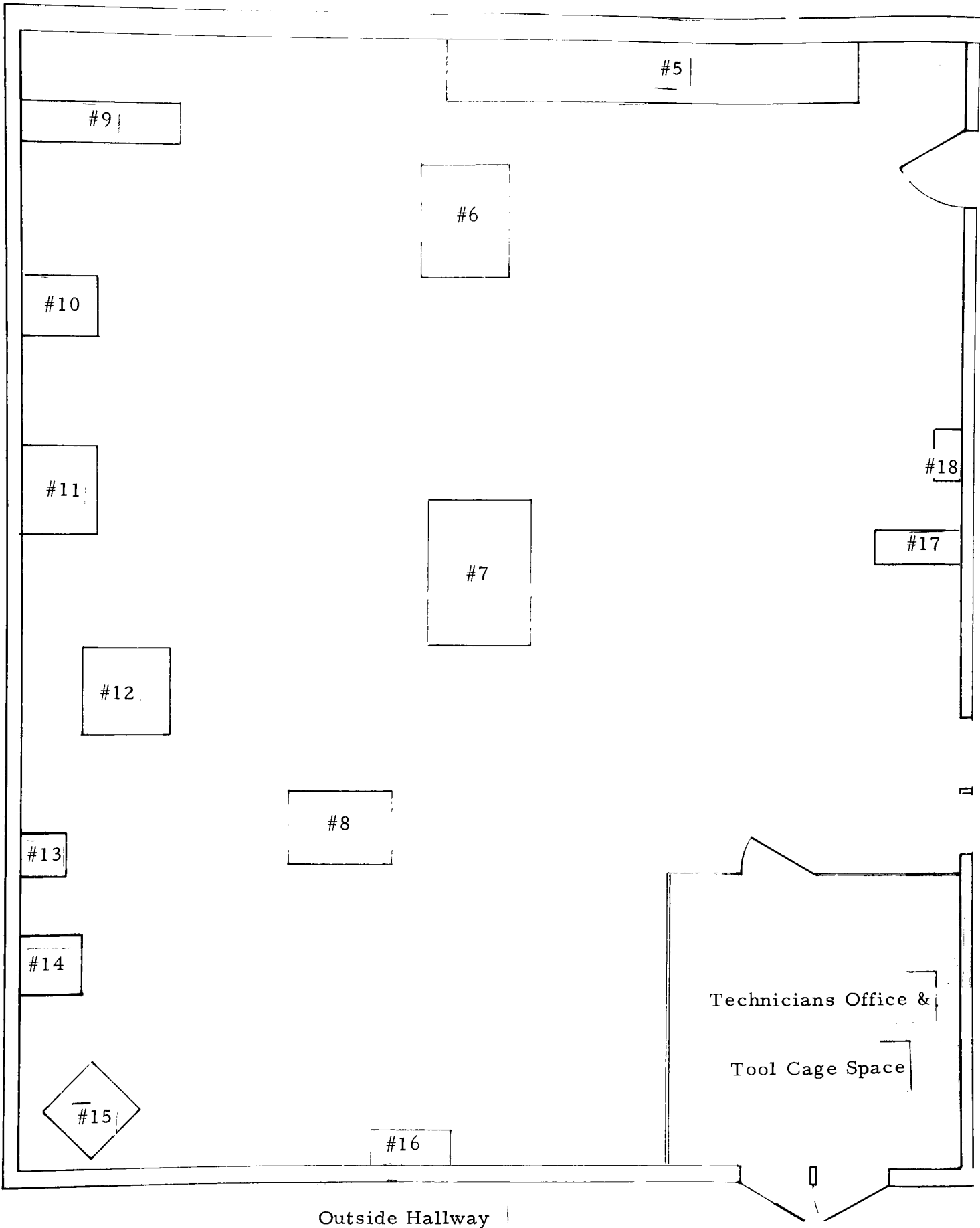
Freshman foundation	50% of time
Art History	25% of time
Liberal arts electives	25% of time
Sophomore foundation	50% of time
Art History	25% of time
Liberal arts electives	25% of time

Junior major studio	50% of time
Art electives	30% of time
Liberal arts electives	20% of time

Senior major studio and thesis	50% of time
Art electives	30% of time
Liberal arts electives	20% of time

Grading

Students are assigned grades in most institutions at the end of each semester. My practice has followed this necessity. I do not continually stress grades during teaching and supervising the shop; I do not assign a grade to each piece a student finishes. Rather, I attempt to grade students on their growth and attitudes, as well as their accomplishments, based on both quantity and quality (of design and construction) of work done.



Outside Hallway

1



6



11



16



2



7



12



17



3



8



13



18



4



9



14



19



5



10



15



20

