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BULLETIN

OF THE

UNIVERSITY OF TEXAS

NUMBER 192

FOUR TIMES A MONTH

OFFICIAL SERIES NO. 57

JULY 22, 1911

Suggestive Courses of Study

Manual Arts, Mechanical Drawing and
Household Economics for Texas
High Schools





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PUBLISHED BY THE UNIVERSITY OF TEXAS
AUSTIN, TEXAS

Entered as second-class mail matter at the postoffice at Austin, Texas.

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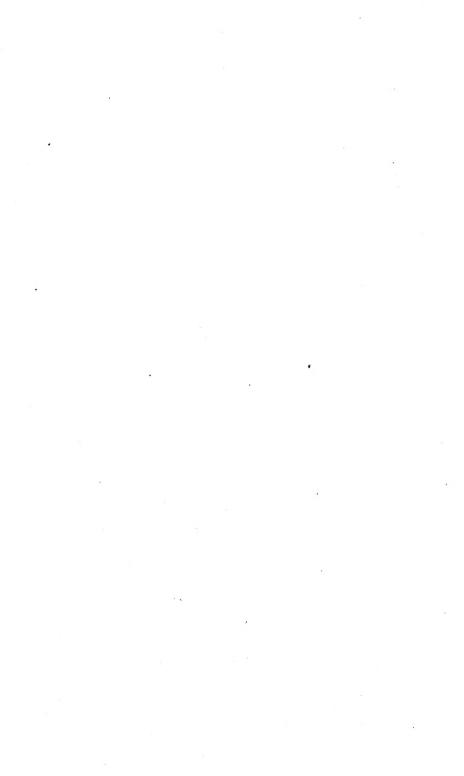
Cultivated mind is the guardian genius of democracy. . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

President Mirabeau B. Lamar.

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INTRODUCTION.

The University of Texas is a democratic institution. It strives to serve all classes of people. In doing this it realizes the necessity of providing for the teaching of many subjects. Languages and Mathemtics have been taught in the schools from the time of the first formal organizations and are well estab-The sciences have been introduced into the schools within the last fifty years. They are now taught by laboratory methods and are gaining in favor and in effectiveness. vocational subjects are persistently knocking for admission. far, except in few places, these subjects are yet unorganized. Their form and content are still more or less problematic. Their worth as disciplinary and informational subjects is unsettled. Enough progress has been made, however, in the organization of these subjects to insure their perpetuation. The University hopes to contribute to the proper organization and development of these subjects in Texas High Schools. In accordance with this desire a conference of teachers of Manual Arts and Household Economics was called to meet at the University, May 5, 1911. In response to this request a number of the best teachers in Texas met and spent an entire day in consultation. The names of these teachers, the names of the institutions attended by them, and the names of the towns in which they are working, are given: E. S. Blackburn (Bradley Polytechnic Institute), Austin; Miss Martha T. Bell (Drexel Institute and Teachers College), College of Industrial Arts; E. M. Wyatt (Kansas State Normal and Stout Manual Training Institute), Houston; N. S. Hunsdon (Washington University), San Antonio; Miss Eula P. Turner, (College of Industrial Arts), Dallas; Miss Eleanor Nesbitt (Drexel Institute), Austin; O. A. Hanszen (Washington University), Dallas; Miss Jessie L. Hetzel (Teachers College, Columbia University), Houston; R. H. Barnes (Illinois State Normal University), Marlin; Miss Florence O'Leary (Stout Institute, Menomonie, Wis.), Austin; Miss Cora A. Reynolds (College of Industrial Arts), Dallas; Miss Nannie E. McIlvain (College of Industrial Arts), Paris; Miss Ora Blair (College attended not given), Belton.

At different times during the day Superintendents and Principals assisted in the discussion. Among those in attendance were Superintendent J. G. Wooton, Paris; Principal W. W. Clement, Temple; Superintendent F. V. Garrison, Sulphur Springs; Superintendent R. G. Hall, Cleburne; Principal J. E. Pearce, Austin; different Professors of the University and teachers in other schools.

The morning was spent in a general discussion of principles underlying the courses of study; the afternoon was given to the formulation of suggestive courses of study in Manual Arts and Domestic Economy for Texas High Schools.

The suggestive courses are given in the following pages with excerpts from the discussions of the morning session.

In publishing this material the University realizes that only a single step is being made in the development of the work. These suggestive courses will be worked out in the different schools and as progress is made further announcements will follow.

Respectfully,

J. L. Henderson, Visitor of Schools.

SUGGESTIVE COURSE OF STUDY IN MANUAL ARTS FOR TEXAS HIGH SCHOOLS

SHOP WORK

First Year

- I. A course of exercises involving use of typical tools and processes.
 - II. Study of woods and their uses.

Second Year

- 1. Cabinet-making and furniture construction.
- II. Turning or Pattern-making and Moulding.

Third Year

I. Forging or Sheet Metal work or Pattern-making and Moulding.

Fourth Year

I. Machine Shop Practice.

SUGGESTIVE COURSE OF STUDY IN MECHANICAL DRAWING FOR TEXAS HIGH SCHOOLS

First Year

- I. Lettering—Roman Alphabet, capitals and lower case. Block Alphabet, capitals. Single Stroke Gothic, capitals and lower case.
- II. Instrumental Drawing—Use of instruments. Scale drawings. Geometric Problems.
- III. Free-hand projection sketching. Principles and decorative design.

· Second Year

- I. Theory of Projection and application to prisms, cylinders, pyramids, cones, etc.
- II. Detail Drawing--Conventional representations of materials. Details of machine parts or building details.
 - III. Tracing.

Third Year

- I. Intersection and development of surfaces and tinting.
- II. Geometric Curves, Cycloids, involutes, etc.
- III. Architectural or Machine Drawing.
- IV. Isometric and oblique drawing.

Fourth Year

- I. Shades and Shadows.
- II. Perspective. Gearing, Cams, Mechanical Movements, or House Plans—Elevations and Specifications.

SUGGESTIVE COURSE OF STUDY IN HOUSEHOLD ECONOMICS FOR TEXAS HIGH SCHOOLS

First Year

Cooking—Application of heat to foods and introductory study of food principles.

Sewing. Fundamental stitches, hand-sewing, making simple articles, or

Sewing-One-half of work indicated above, and

Drawing—Free-hand drawing, sketching and elementary mechanical drawing.

Second Year

Cooking—Continue study of food principles. Preservation of foods.

Sewing—Planning and making plain garments, or Sewing—One-half of work indicated above and Applied Design—Theory of design and its application to some material such as wood or clay.

Third Year

Laundering—Use of re-agents, bleaching, dry-cleaning, removal of stains.

Advanced Cooking—More complex dishes. Planning and serving meals.

Dress-making and Drafting—Study of textiles. Advanced sewing, plain tailored waist, skirt, dress, woolen skirt, or

Applied Design—More technical designing, application to cloth, leather, metal, pottery.

Fourth Year

Home Economics—Planning the home, site, house-plans, decorations, trees, sanitation, plumbing, heating, lighting, ventilations, furnishings.

Home Nursing.

Millinery.

Art Needle Work.

Household Decoration.

EXCERPTS FROM THE MINUTES OF THE CONFERENCE

(Because of the informal manner in which the meeting was conducted it was not always possible to get the names of the speakers or all of the points made.)

The Visitor of Schools called the conference to order and made the following remarks: For sometime the University has felt the need of lending a hand in the development of the teaching of Domestic Economy and Manual Arts in Texas High Schools. The Faculty has arranged for crediting these subjects. This year we have made an examination of conditions in the state with reference to the teaching of these subjects. We found on investigation that no two schools in Texas are teaching even approximately the same things or have they even approximately the same courses of study. So, we were puzzled to know how to assign credits in these subjects. We may say to you that in crediting these subjects the University has in mind, first, the development of these subjects in the schools.

When this meeting was called it was not our expectation that we would have a large attendance. In fact we wanted workers those who know what methods are and what courses are. wanted to do work and not eulogize these subjects. We all believe in them and we are all enthusiastic about them. We want to make them worthy of our commendation and support and if I could express in a few works our desires, it would be that we do work, and as little talk as we can possibly get along with. The first thing we planned was a general discussion with reference to certain general topics which underlie the courses. had in mind, if it meets with your approval, the appointment of a committee of teachers who would be willing to spend two hours between 11:30 and 2:30 this afternoon in a discussion and organization of a course that we might publish to the state. Permit me to say that we have not had in mind that this course which you may present this afternoon will be used exactly by any two schools in the state. It will merely be an outline, merely suggestive, and different schools in the state will adapt it to their local needs. Furthermore, it is not expected that this course of study which you will plan and suggest this afternoon will be good for any length of time, it is to be a starting point. We think after this statement we should agree on some method of conducting the meeting. Now what form do you desire this meeting to take?

Mr. Wyatt: Mr. Henderson, I believe that we should get down to work as quickly as possible. We should have a chairman and secretary, so that we can make a record of our proceedings. As you are more familiar with the program and have revolved this in mind over and over again, if it is in order, I nominate Mr. Henderson for Chairman of this Conference.

Motion seconded and carried.

Mr. Henderson: I do not look upon this as an honor, I must confess that it is a labor. I have requested my Secretary, Mr. Embrey, to attend this meeting and make a stenographic report of the proceedings. We shall be glad, however, to have you choose a Secretary.

Mr. Hanszen: Would it not be better to allow your stenographer to act as secretary? He would be able to write up the minutes better than any one else.

Mr. Wyatt: In absence of objection we will ask Mr. Henderson to take care of the minutes through his stenographer.

Mr. Wooten: Mr. Chairman, it seems to me that from your statement we should have a round table discussion in order that the committee to be appointed may have something before them and may know the sentiment of the teachers assembled. It may be that the city of Austin has a well organized department of Manual Arts and Domestic Economy and others here, just beginning, would have nothing so elaborate. Yet a skeleton of something to aid all ought to be the thing in view. I believe the committee would work more intelligently on the ideas we would give them on the subject if they would hear what we think about it before they formulate this skeleton and suggest that we take up these things one at a time and get at them.

Topics submitted for discussion:

- 1. Shall we require some Manual Training and Domestic Science of all pupils or shall these studies be optional?
- 2. Shall we have Manual Training and Domestic Science courses or shall we have a small amount of these subjects mingled with other courses?

- 3. Shall we alternate sewing and cooking or shall we carry the two subjects simultaneously? Should drawing be required with sewing?
- 4. Shall these courses be distributed over one, two, three, or four years?
 - 5. The basis of credit for vocational subjects.
- 6. An outline of work so far as possible for the different years.

Mr. Hanszen: I believe no other suggestion is to the point and believe that we can proceed to the outline you have given. May I make this suggestion, that we change the words "Manual Training" to "Manual Arts." In some localities Manual Training is one form of education and includes domestic science, household duties, and Art refers to context. If we would suggest the words Manual Art for Manual Training, there would be no confusion in our minds.

Miss Bell: I think Mr. Hanszen's idea is a very good one, to have a term that is inclusive, but I believe that Household Arts would be better than Manual Arts.

Mr. Blackburn: I believe that we are going to get off the subject entirely. We are getting on dangerous ground when we get to talking about these names and I move that we simply avoid the subject.

Mr. Hanszen: My idea was that Manual Training referred to the mode of education while Manual Art was the subject matter.

Question: Shall we require some study of Manual Arts and Domestic Economy of all pupils or shall these studies be optional?

Mr. Clement: Let us hear from Mr. Hanszen on this question. Mr. Hanszen: Before we enter into this discussion it will be necessary to think out within our own minds, what will be practicable. We may regard that every boy and girl ought to have some form of Manual Art, some form of training through the hand and eye, in some form of industrial work, cooking, sewing, woodwork, applied design, but we must think of this in connection with our present day high schools. While I feel personally that every boy and girl in our state should have some experience along these lines, yet I realize that it would be a serious problem to attempt to force upon every boy and girl

in our high schools such a course of study. Then again, some localities have Manual Arts and Domestic Economy in the grades. I believe the most expedient recommendation to make is that these courses be elective in the high school putting them in the same shoes as the other old line subjects. We no longer require all the languages in the high school, nor do we require all the sciences in the high school. So, I would prefer to make these subjects elective.

Mr. Blackburn: I am inclined to agree with Mr. Hanszen on these subjects. Our tendency in all high school subjects is to allow electives. We do not require all students to take languages nor all students to take some subjects which we consider good for all students. We recognize the individuality which exists among our students. I know every one has had pupils taking Manual Art and Domestic Economy work, who were just simply wasting their time taking it. I should not say wasting their time, but they would make better use of the time putting it in on some other subject.

Chairman: Let us hear from Miss Nesbitt.

Miss Nesbitt: I think it is very necessary that girls have a training in home-making, that is what it is; I am not prepared, however, to urge that it be required of all pupils.

Chairman: We will be glad to hear Miss Bell.

Miss Bell: I was just thinking that in case you teach Manual Art and Domestic Economy in the lower grades you might make it optional in the High School. I would advocate making it an elective course.

Chairman: Is there any difference of opinion? If there is not we would better go to the next topic. Four speakers have favored making these subjects optional in the high school.

Mr. Wooten: I object to that. I want to say that I believe everybody would like to have it as a course and every boy and girl learn something of it. Now then the point to consider is can we make it practical for four years? I have not had time to put anything of that kind in the lower grades. All of that time is taken up in making a foundation for high school work. We demand that pupils take it in the ninth grade, or sophomore year, unless there is some good reason for not doing so. I believe in flexibility in this matter. We have tried it in the eighth grade

just in sewing. We expect to make two years of it required and the last two years optional or elective as the case may be. This will give a foundation along that line and there is no objection to it and everybody in our town is in favor of it. I don't believe in going to the expense of putting this in and then making a plaything of it. If you put it down as a strong course and require them to do it you will have a success that you won't have otherwise.

Miss Hetzel: I believe that some of the work should reach every boy and girl in the High School.

Chairman: We have both sides presented. Let us go on to the next topic: "Shall we have Domestic Economy and Manual Arts courses or shall we have a small amount of these courses mingled with the other courses?"

Miss Hetzel: I think that some of this work ought to reach every pupil but as to courses I believe a regular Domestic Economy course ought to be put into the High School. It ought to be distinctive for that part which is elective, but I think some of it ought to be required.

Someone: Your idea is that you would organize a four years' course and then require pupils to come in and take one year of this work?

Miss Hetzel: To have the elementary year or a small part of it required of all pupils, but those who want to take any further work would have that as elective.

Someone: Would you have the Manual Arts mingled with all the other courses and also a special course?

Mr. Blackburn: Would you not find a tendency for pupils in the Manual Arts course to come in and, not making good grades, switch off into other courses?

Miss Hetzel: No, we have it arranged that way in Houston. The first year is required of all pupils and after that the work is elective and from that on they must stick to these courses the same as any other. I don't say that the first year is the best.

Miss O'Leary: I think Domestic Economy is essential and think it ought to be compulsory, but we find that a few people are absolutely hopeless in this line and I don't think it is necessary to make these people take that work. If they don't care about it, I think they could spend their time in the high school

in taking those courses which will do them most good. I believe that it is best to have it optional in the grades and have it slightly mingled with the other courses; then have a four years' course of it in the High School.

Chairman: Would you have two periods a week for two years or one period a week running through four years? Would you arrange so that a little bit might be taken in each of the four years or a great deal in the first two years? Would you have it concentrated or distributed?

Miss O'Leary: I would have it evenly distributed, enough to keep them busy for four periods a week all through the high school course. If we make it a strong course, I do not see why we cannot keep them busy this length of time.

Chairman: It seems to me that three different courses may be introduced in these subjects. One course will contain a small amount of the subject in each year of the high school, a second course will have a large amount of these subjects for two years, a third course will provide a large amount of work for all four years. The last course would correspond to our present Latin, history or science courses. Shall we arrange to have say two periods each week through the four years, four or five periods a week for two years, or four or five periods a week for four years?

Miss McIlvain: It seems to me that the best thing to do is to give them a thorough course but not make it extensive. For instance, let them get a good course and one that will be of benefit to them all through life but at the same time not require so much of it.

Mr. Wyatt: I agree with Miss McIlvain. I don't think we ought to try to give them so much work in the high school—make it a strong course but do not make it too deep. Let them go somewhere and prepare themselves in advanced work if they desire it. I move that we go on record in favor of making some Manual Arts and Domestic Economy in the school course compulsory for all students and in favor of having a full four years' course of elective work.

Mr. Barnes: I second the motion.

Miss Hetzel: Some one spoke about the danger of going too deep with high school pupils. I think that we can spend a

whole lot more time than is given to it without going too deep. I think the danger is that our work is too superficial.

· Mr. Wooten: Whenever you put a course like that in the high school you make it a trade school and leave the literary part out. I don't believe in the side show swallowing up the circus.

Chairman: It has been moved and seconded that this resolution be adopted. Are you ready for the question? Carried.

Mr. Wyatt: I have another motion I would like to present in order to make this first resolution a little more definite: That the small amount required be one and one-half hours a week; that the four years elective course be at least four double periods a week for each year.

Considerable discussion followed this motion and the resolution was revised.

Chairman: The motion as revised is: That the teachers recommend that the part of the work that is to be compulsory or required, if it be given in the grammar school, be at least one and one-half hours for one year; if it be given in the high school that it be at least two double periods per week; and, that the work indicated as elective shall cover at least four double periods a week for four years in the high school. Resolution carried.

Chairman: Shall we go to number 3? "Shall we alternate sewing and cooking or shall we carry the two subjects simultaneously?" "Should drawing be required with sewing?"

Someone: It seems that we are hardly in a position to make a recommendation on that subject at all on account of the local conditions being so different. I believe that we ought to leave that entirely to the schools as to whether to alernate or put the sewing or the cooking first.

Mr. Wyatt: I suggest that we go on record as favoring a certain arrangement.

Miss Hetzel I move that we drop it. I think that it is a matter to be decided by local conditions entirely.

Chairman: If it is agreeable this subject will be dropped.

Chairman: Would you have any mechanical drawing at all in the Domestic Economy course?

Miss Reynolds: I think you should. They have to have some idea of perspective and all that part of mechanical drawing such as getting the corners of a room and the fire place in the right

proportion, and I think that they ought to have some mechanical drawing.

Mr. Blackburn: It seems to me that if they have a lady, she ought to teach it and suit her course to needs.

Miss Bell: It seems to me that the drawing should be required in the Household Art course. They should know enough to be able to plan their homes. They need to know something about design.

Dr. Rall: Should not the artistic side be considered? It is not to make a sketch, or teach her to understand the technique of an architect.

Mr. Blackburn: Dr. Rall has the correct idea. It is very difficult to get a girl to draw a straight line by a ruler. They can't do it. They don't know an inch from an inch and a quarter.

Someone: The artistic side is what they need. They ought to be able to understand an architect's plan, and have the different features explained; but girls should not be put to drawing house plans.

Mr. Hanszen: The very fact that they are unable to draw is one good reason why they should be required to do it. As far as ability to do that there is no question—we can show thousands of drawings from the Dallas High School and College of Industrial Arts that will compare with the boys. Of course I don't want it understood that the girls should be architects, but the very fact of having made a house plan of a cottage enables her to make the sketch better and quicker and she has a better conception of distances and squares, etc. It is a means to an end.

Miss O'Leary: I believe that I would agree with Mr. Blackburn. It is the artistic side we want to develop. It is the time we have to consider, and I think we are losing sight of the real point in this line. We should make it design throughout and I move that free hand designing be required in all Domestic Economy courses.

Mr. Hanszen: Could we not just say design?

Moved and seconded that design be required in all free elective courses. Carried.

"The basis of credit for vocational subjects."

Someone: It seems to me that the basis of credit should be the

same as we have in other subjects assuming that the work is taught in the same efficient manner and the same effort is put forth on the part of the child and the same time given. It seems that the basis of credit should be the same as in Latin and it is up to the University to pass upon the credit. It seems to me that you can easily work up the schools to the standard required. We have to go on the assumption that the work, in order to get the credit, would be equal to the other lines of work.

Chairman: You mean the basis upon which we credit sciences and not Latin?

Someone: Yes.

Chairman: Let me put it this way to you. The University in making provisions for extending credit for these vocational subjects had a pretty heated discussion. The next two or three years will probably not see additional credits given to Manual Arts and Domestic Economy. We want to place these credits so that you will get the best results in your schools. If you credit poor work you will not have any leverage to raise your courses. If you ask for four units for your courses as they now are you will handicap yourselves.

Someone: We see it perfectly plain.

Chairman: We have come to you to suggest how it will be best to assign these credits that we now allow.

Someone: When we put this course in the high school some other work must give way. Suppose the Latin gives way, don't you think the work ought to receive the same credit as if the children took the Latin?

Chairman: Theoretically, yes; practically, no.

Mr. Blackburn: The full credit should be given to the school with the most Manual Arts in it and that would have a tendency to improve all the other schools. I do not believe in making the high school a feeder for the University. It seems that all the Manual Arts and Domestic Economy given should be credited in the high school toward graduation. As our graduates in the Manual Arts and Domestic Economy have the same as Latin graduates, the credit given in high schools should be just the same in Manual Arts and Domestic Economy as for any other courses for graduates from the high school, but in the Univer-

sity the credit should be given to the school which has the full work in Manual Arts and Domestic Economy. Apportion the credit out as the work is given: four years, two units; three years, one and one-half units; two years, one unit; four double periods a week.

Someone: That would give us an opportunity at some future conference to extend the work to five double periods per week, if we should desire to do so.

Dr. Rall: Can you measure quantitatively the time spent in these subjects as you do in other subjects? Can we state that two hours spent in shop-work in Manual Arts are equivalent to two periods spent in the laboratory of Physics or Chemistry? Is it not true that the boy and girl in the Physics and Chemistry must do considerable work outside his laboratory period, and that the boy in his woodwork does not have to do the outside work? I have visited classes where they do not have any textbook at all. Everything was included in the first period. oratory hours are divided at the University of Texas. hours are equivalent to one hour of recitation, because the students are required to do considerable on the outside. In other schools the laboratory covers three hours, equivalent to one in the class room and that means on that basis that every bit of the work is done in the laboratory. Now it seems to me that the Manual Arts and Domestic Economy ought to be measured on the latter basis.

Moved and carried that two credits or two units be assigned to those schools giving Manual Arts and Domestic Economy for four years, four double periods per week, and that fractional credits be assigned in accordance with the pro rata amount of work done.

SUMMARY OF RESOLUTIONS.

1. Shall we require some Manual Arts and Domestic Economy of all pupils or shall these studies be entirely optional?

Resolution: We favor making some Manual Arts and Domestic Economy compulsory for all pupils. Minimum amount required, if given in the grammar school to be at least one and

one-half hours per week for one year; if given in the high school, to be at least two double periods per week for one year.

2. Shall we have Manual Arts and Domestic Economy courses or shall we have a small amount of these subjects mingled with other courses?

Resolution: We favor having full four year courses in these subjects. The full courses to be elective with some portions required of all pupils.

3. Shall we alternate sewing and cooking or shall we carry the two subjects simultaneously?

Resolution: We favor leaving this to the individual schools. Shall drawing be required with sewing?

Resolution: We favor making design a part of all full courses in sewing.

4. The basis of credit for vocational subjects.

Resolution: We recommend that, under present conditions, two units of credit be assigned to those schools giving Manual Arts and Domestic Economy for four years, four double periods per week, and that fractional credits be assigned in accordance with the gro rata amount of work done in other schools.

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