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THE HISTORY OF THE INDUSTRIAL ARTS DEPARTMENT  
OF NORTH TEXAS STATE COLLEGE  
FROM 1911 TO 1955

THESIS

Presented to the Graduate Council of the  
North Texas State College in Partial  
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

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## CHAPTER I

### INTRODUCTION

Few people, including students of industrial arts who have passed through this institution, know much concerning the beginning of industrial arts in the United States, in Texas, or for that matter in the department at North Texas State College. Although the study of the history of industrial arts specifically as a subject is not studied in this institution, it was found that this history had a very interesting beginning.

In the study of industrial arts in Texas one must go back to the date 1825 and beyond the boundaries of the state to New Harmony, Indiana. This was the site of one of the first manual labor schools in the United States. This school was started by Robert Owen, a Scotsman who was dissatisfied with the religious aspects of the schools in Scotland as well as with the type of learning taught in the schools. William Maclure was the educational director of the New Harmony school. Maclure was one of the first men in America to see the possibilities of manual labor in the schools of America. The curriculum of New Harmony included seventeen different phases of study.<sup>1</sup>

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<sup>1</sup>Quarterly Register and Journal of the American Educational Society. Quoted by C. A. Bennett, History of Manual and Industrial Education up to 1870 (Peoria, 1920), pp.203-04.

While the above does not necessarily have a direct bearing on the work now given in Texas, it was the school in which N. S. Hunsden studied in his earlier years. After leaving New Harmony he attended the Woodward Manual Training School in St. Louis, Missouri.

The Woodward Manual Training School was begun in 1880 with Calvin M. Woodward as the leading spirit. The Manual Training School not only brought in manual training, but also general education at the scholastic level of the public high schools. As a private school for boys it was one of the leading educational experiments of its time. The Woodward Manual Training School, because of its high ranking as an educational experiment, caused other schools of the same nature to be established in other large cities a short time thereafter. The New Harmony school taught people to think of organized shops as manual labor schools. When Woodward started the Manual Training School at St. Louis people still had this concept and thought of those classes as the same. The philosophy of the Manual Training School was that it should be of a general educational type of program and should be called manual training rather than manual labor. Because of this change educators were afraid it would not be a success. However, after this curriculum had been tried and proved a success, the boards of education in several large cities began to place manual training in the curriculum of their public

schools. This change was taking place mostly in the eastern part of the United States.

During this period John T. Allan came to Texas from Scotland. He saw the need in Texas for manual training in the schools for whites as well as in those for Negroes. In his will Allan left his entire estate for the purpose of financing a manual training school. It was through his will that the movement was started to include manual training in the public schools of Austin. The school was formally opened in the temporary capitol building on Eleventh Street in 1896.<sup>2</sup> Today John T. Allan is called the Father of Manual Training in Texas. There is also a junior high school in Austin named for him.

#### Statement of the Study

The introduction of anything new or of a change in any school or department is always interesting to those who have had anything to do with the change or with graduates of that school. The same is true of a department. Hence, someone usually feels the need of recording the history or of changes made. The department of industrial arts at North Texas State College began in 1911 and almost half a century has elapsed since that date. Almost every department or school

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<sup>2</sup> Manual Training Department, Bulletin, Austin City Schools (Austin, 1904).

celebrates its century or half-century mark and someone is usually delegated to write a history.

#### Purpose of the Study

At the request of the Department of Industrial Arts, North Texas State College, Denton, Texas, this record of the beginning and of the changes made in the department has been compiled. Not only the changes that were made in late years, but the propaganda, the speeches, and the laws which brought about this department will be reviewed.

#### Delimitation

Although North Texas State College has many departments, this study will be confined entirely to the Department of Industrial Arts.

#### Source of Data

The data to be used in this study will be obtained from the following sources: theses, The Yucca (school annual), Bulletins from North Texas State College, laws of the state, interviews with older administrative officers, instructors, and friends of the department.

#### Definition of Terms Used

"Industrial arts", as Good defines the term, refers to

1. Those occupations by which changes are made in the form of materials to increase their value for human use.

2. An area of education dealing with socio-economic problems and occupational opportunities involving experience with a wide range of materials, tools, processes, products, and occupations typical of an industrial society.

3. A phase of the educational program concerned with orienting individuals through study and experience to the technical-industrial side of society for the purpose of enabling them to deal more intelligently with consumers' goods, to be more efficient producers, to use leisure time more effectively and enjoyably, to have a greater appreciation of material culture, and to act more intelligently in regard to matters of health and safety, especially affected by industry. 3

"Manual training" is a term used to describe "an early type of school shop activity which was restricted to fixed exercises in woodwork, metalwork, and mechanical drawing; strong emphasis was placed on tool exercises and manual skills."<sup>4</sup>

Good defines "general education" as

1. A broad type of education aimed at developing attitudes, abilities, and behavior considered desirable by society but not necessarily preparing the learner for specific types of vocational or avocational pursuit.

2. A synonym sometimes used for cultural education or liberal education. 5

<sup>3</sup> Carter V. Good, Dictionary of Education (New York, 1945), p. 215.

<sup>4</sup> Owen T. Shipp, Jr., "The Influences of the Manual Labor Movement on Industrial Arts in America," unpublished master's thesis, Department of Industrial Arts, North Texas State College, Denton, Texas, 1950, p. 4.

<sup>5</sup> Good, op. cit., p. 183.



## CHAPTER II

### HISTORY OF MANUAL TRAINING IN TEXAS

After the Civil War, conditions in Texas were such that there should have been some scheme of practical education in the white schools as there was in the colored schools. The white men had not yet recognized the need for their sons to learn the use of their hands. This was the situation John T. Allan found when he attempted to persuade the educators of Texas that they needed a more generalized type of education which would include manual training. But the people of Texas, as well as those in other southern states, could only look at organized shop work as manual labor as it was taught in the New Harmony school in Indiana. The history of the New Harmony Manual Labor School, as depicted by George B. Lockwood in his book, The New Harmony Movement, reveals the type of work that was done in the schools in the Manual Labor Movement.<sup>6</sup> This, to the southerner, was more or less abhorrent or at least not the type of education considered valuable to the past owners of slaves. Calvin Milton Woodward, whose school was patterned somewhat after that of the New Harmony Movement, helped this situation somewhat by

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<sup>6</sup> George B. Lockwood, The New Harmony Movement (New York, 1905), p. 243.

starting organized shop work at Washington University at St. Louis, Missouri, and calling it manual training.<sup>7</sup>

Manual training was given a very good start in Texas through the will of John T. Allan who left his rather large estate to the city of Austin for the establishment of an industrial school. For this act Allan was called the Father of Manual Training in Texas.<sup>8</sup> His will stated that his property was to set up an industrial school so that boys could be taught the practical use of tools, along with the scientific principles involved. Since the will had not provided funds for the salary of a teacher for the industrial school, it was doubted whether public school funds could be used to supplement this fund. The matter was referred to Oscar H. Cooper, State Superintendent of Public Instruction, who ruled that the board of trustees of the city of Austin could provide funds for the salary of such a teacher out of state and local tax money.<sup>9</sup>

After the ruling by Cooper, the Austin board of trustees brought a professor from Florida to Austin to discuss the matter of manual training in the public schools of Austin.

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<sup>7</sup>C. P. Coates, "History of the Manual Training School of Washington University," Bulletin, U. S. Bureau of Education (1923), No. 3, p. 50.

<sup>8</sup>Austin Maroon, Allan-Gilker edition, May 21, 1929.

<sup>9</sup>Letter from O. H. Cooper to Z. T. Fulmore and A. P. Wooldridge, Austin, Texas, July 30, 1899.

Also invited to discuss the value of the work was a Negro teacher of manual training from Tillotson Institute. At this time Elizabeth Ney, the famous sculptress living in Austin, tried to persuade the school board to use some of the accumulated funds for the teaching of fine arts. However, the board would not consider this proposal at all. The problem of space had to be considered since the public schools could not make room for the teaching of manual training. Since there was no institution in Texas prepared to train teachers in manual training, it was necessary for the board to go out of the state to secure a teacher for the school.

The board decided to offer manual training in the high school at Austin and elected N. S. Hunsden, from the Woodward Manual Training School at St. Louis, as the first teacher of manual training in Texas. Hunsden had first attended the manual labor school at New Harmony, Indiana, as was pointed out in the Introduction to this study. He organized his course of study along the same lines as that of the Woodward Manual Training School. The school was formally opened on September 21, 1896, with eighteen students in the first class in Manual Training. At the end of the first year of work the school held an exhibit which won many converts for manual training.

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<sup>10</sup> Manual Training Department, Bulletin, Austin City Schools (1904).

Organized shop work, or manual training, continued to win public approval during the next six-year period. The number of students increased from eighteen to about eighty, with the male attendance increasing more than 100 per cent during this same period. Educators and also the general public began to realize that organized shop work was keeping many students in school who would otherwise leave school. This feature caused the public approval of manual training.

In Texas, manual training was beginning to be accepted. Although the state had to pass laws to finance manual training, many men came forward to help in the fight for industrial education in general. A great deal of influence was exerted through the Greenville Headlight by its editor, V. W. Grubbs. Grubbs, a judge, suggested that Woodward be asked to speak to the state legislature in behalf of manual training. After Woodward's talk on manual training there was a mass meeting of the people interested in manual training and J. S. Kendall was elected chairman to preside over the meeting. Grubbs made the motion that resolutions be drawn up setting forth the values of manual training, as it was called until much later. A committee was appointed, consisting of one member from each senatorial district, to further promote manual training.<sup>11</sup> All the work done by this committee under the chairmanship of

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<sup>11</sup>

Austin Daily Statesman, April 7-8, 1899.

Grubbs undoubtedly laid the foundation for industrial arts in Texas.<sup>12</sup> This committee paved the way for the first appropriation bill to aid manual training in Texas. This bill was passed in 1903.

This bill was drawn up by Arthur Lefevre and appropriated \$10,000 annually for the biennium 1903-1905 to be expended in duplication of any amount set apart by the trustees of any independent school district, the limits being not less than \$100 and not more than \$500.<sup>13</sup> This money was to be used to establish or purchase equipment for the teaching of manual training.<sup>14</sup> This appropriation gave several schools a good start. Since public opinion had kept down manual training and this bill gave the school districts money to start manual training, the public did not object to seeing it begun in their schools.

Before state aid was available some schools introduced manual training by private subscriptions. Austin was the first in Texas to have such schools, largely because of the money from the Allan estate. Devine, in 1901, was the second town in Texas to have a manual training school. At this time

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<sup>12</sup>

The Dallas Morning News, May 1, 1899.

<sup>13</sup>S. A. Blackburn, "The Development of Vocational Education in Texas," unpublished doctoral dissertation, Department of Industrial Arts, The University of Texas, Austin, Texas, 1930.

<sup>14</sup>Report of J. M. Howells, President of the Dallas School Board, 1899.

Devine had a population of a little over 1200. With such a small town introducing and carrying on a course in manual training, the president of the Dallas school board recommended that manual training be offered to the students of the Dallas public school system. This was done in 1903 under the direction of O. A. Hanzen. Two courses were offered, one in bench work and the other in drawing. The work was set up in an old fire engine house. However, in 1905 a new building was erected and it is now known as the Crozier Technical High School.

These schools were the first in Texas to offer manual training, but with the aid of the bill of 1903 twelve other schools reported that they had received aid. Some of these schools included the following: Fort Worth, Belton, Itasca, Waxahachie, Paris, Taylor, Beaumont, and Kaufman.<sup>16</sup> The following two years aid was given to three more schools--Center, Waco, and Marlin.

Manual training was being introduced as a part of the curriculum of the schools in Texas but no teacher institution had been given an appropriation to start the training of teachers in Texas. The school boards were forced to go out of the state for their teachers of manual training. The

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<sup>15</sup>Proceedings of Texas State Teachers Association,  
1901.

<sup>16</sup>Fourteenth Biennial Report of the State Superintendent of Public Instruction (Austin, 1902-1904), p. 22.

Thirty-first Legislature in 1909 enacted bills which provided that all the state normal schools could teach manual training, domestic economy, and agriculture. This was probably the greatest impetus to the development of manual training in Texas. This not only included the state normal schools existing then, but also any of those that might come into existence later. The second bill authorized an appropriation of \$18,000 for each of two years, 1909-1910 and 1910-1911, for the purchase of equipment, to provide rooms, and for the salaries of teachers for those two years. The aid given to independent school districts was also raised to not less than \$500 and not more than \$2000.<sup>17</sup> The bill raised the appropriation of 1903 which was not less than \$100 and not more than \$500.

This bill caused many schools to introduce manual training in their curricula. From the fifteen schools reported to have manual training in 1909, the number increased to forty-two in 1910. There were better facilities with better equipped shops for the students taking manual training. The Thirty-second Legislature continued the earlier bill, and also provided funds for equipping and maintaining manual training departments.<sup>18</sup>

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<sup>17</sup>Thirty-first Legislature, General Laws, Chapter 113, Section 5.

<sup>18</sup>Thirty-second Legislature, General Laws, Chapter 26, Section 3.

Under the provisions of the bill passed by the Thirty-first Legislature all normal schools could teach manual training if they so desired. At North Texas State College a department was set up in the basement of the old Chemistry Building. C. A. Tripp was brought to Denton from Council Bluff, Iowa, as the first instructor of manual training.



## CHAPTER III

### THE BEGINNING OF MANUAL TRAINING AT NORTH TEXAS STATE COLLEGE

Under the supervision of C. A. Tripp the first manual training was begun at North Texas State College in the fall of 1910. Tripp got his early training at Central Michigan Teachers College at Mount Pleasant, Michigan. His training was started in 1904 and was finished at Central Michigan Teachers College in 1907. Tripp then decided to go to Purdue University where he worked another year on his training.

In 1908 Tripp left Purdue for Council Bluff, Iowa, where he taught manual training for two years. In August of 1910, W. H. Bruce, President of North Texas State College, called Tripp and asked him to come to North Texas State College to teach manual training.<sup>1</sup> Tripp left Council Bluff in the fall of 1910.

Machines and hand tools had been ordered from New York City before Tripp left Council Bluff. President Bruce had told Tripp that direct current was available in the Chemistry Building and direct current machines were ordered. When

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<sup>1</sup> Personal interview with C. A. Tripp, July 22, 1954.

Tripp arrived at North Texas State College the machines had been delivered. The current available was alternating current so the machines or the power supply had to be changed. A direct current generator was ordered but it did not arrive for about three months.<sup>2</sup> During this time drawing was taught until the machinery could be installed.

After the new generator had been changed for direct current, 220 voltage was needed to operate some of the machines. The city of Denton wanted \$1500 to put up the line as far out as the college. Instead of paying the city this amount a power plant was put in to furnish power for the campus and for the machines in the manual training department.

The curriculum of manual training consisted only of wood work and drawing. In the wood shop there were lathes, a table saw, a band saw, a planer, and a jointer in addition to all the hand tools needed. Each student paid a fee for his material. All types of projects were made in the wood shop. At that time very few students had had manual training in high school, yet Tripp stated that the projects made by the students were very good.<sup>3</sup> During Tripp's first summer at the college, William Joseph McConnell, later president of North Texas State College, was one of Tripp's students in a drawing class. Tripp taught both wood work and drawing.

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<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

The manual training classes used all the rooms with one exception in the basement of the old Science Building on the northeast corner of the campus.

Tripp was at North Texas State College two years. He then went to Madison, Wisconsin, to do further work on his degree. Later, he returned to Denton as Registrar at The College of Industrial Arts, now known as The Texas State College for Women. After being registrar several years he resigned to go into business.

Hugo J. P. Vitz came to North Texas in the fall of 1912. Vitz received his training in manual training at Purdue University. (For more information see the Appendix.)

There were five distinct courses of study at North Texas State College in 1912. Industrial arts at that time was listed as one of the five courses of study. This course of study was divided between home economics and manual training, and was designed mostly for the preparation of teachers of industrial arts and home economics--teachers who were expecting to teach in the public schools of Texas.

At this time North Texas State College did not grant degrees, but did grant teaching certificates. In order to get a teaching certificate in manual training the student had to have sixty units, with nine units in manual training. A unit consisted of sixty recitations of forty-five minutes each, or term hours as was used later.<sup>4</sup>

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<sup>4</sup>North Texas State Normal College, Bulletin, XLII (July, 1913), 9-10.

The manual training courses offered are listed below.

Mechanical drawing  
 Joinery and bench work  
 History of manual training  
 Cabinet work  
 Organization of manual training  
 Wood turning  
 Elementary handwork

The course of study was as follows:

Freshman Year

Manual training I (elective)  
 Mechanical drawing, bench work

Junior Year

Manual training II (elective)  
 Mechanical drawing, bench work

Senior Year

Manual training III (elective)  
 Cabinet work, turning, elementary hand work,  
 history of manual training, theory and organization of manual training.

In 1913 nine units were offered in manual training.

The course in foundry had not been offered before this year. In wood there was bench work and wood turning, pattern making and also vocational wood work. Drafting offered more than either metal or wood. Mechanical, machine, advanced machine and architectural drafting was offered in 1913. A course in the methods of teaching manual training was offered for the first time in 1913. This course covered a historical review of the theories and practices of educational reformers, including Pestalozzi, Froebel, and others.

The manual training curriculum was the same in 1914 as in 1913. The Manual Arts Building was under construction. This building when equipped would enable the school to meet all reasonable demands for preparing teachers of manual training and home economics at that period.<sup>5</sup>

The Manual Arts Building was finished in 1915 and gave impetus to the manual training department.<sup>6</sup> Machine wood work was added as a course to the bench work and wood turning. A drawing course was added to serve the agricultural department. A course in house planning and one in cement construction was also added. Blacksmithing was added to the other courses in the manual training department in 1916.

Machine design and advanced blacksmithing were added to the already large curriculum of the manual training department. S. A. Blackburn (See Appendix for further information) came to North Texas State College in 1917, later to become head of the department.

In 1918 more changes were made in the manual training department. Carpentry, farm blacksmithing, woodturning and cabinet making, along with an elementary concrete construction course were added to the curriculum of the department.<sup>7</sup>

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<sup>5</sup>North Texas State Normal College, Bulletin, XLIV (April, 1914), 16.

<sup>6</sup>North Texas State Normal College, Bulletin, XLVIII (July, 1915), 10.

<sup>7</sup>North Texas State Normal College, Bulletin, LVII (July, 1918), 51.

Artsmithing was also added in 1918 and was the first crafts course offered at the college. Also industrial arts were introduced in the grade schools. This course was more or less a crafts course. Another course that was added in 1918 was a course in the organization of manual training.

In 1919 and 1920 there were no changes made to the curriculum of the manual training department. Simple joinery and furniture making was added in 1921. The curriculum in 1921 had more than thirty courses. This was a big change in the department since 1911 when it had started with nine courses. However, in 1922 some courses were combined and some courses were dropped from the curriculum of the department. Only nineteen courses were in the curriculum in 1922.

The year 1923 marked the beginning of the presidency of R. L. Marquis. A major in manual training in 1923 required a minimum of thirty-six term hours (twenty-four semester hours) with a maximum of forty-eight term hours (thirty-two semester hours).<sup>8</sup> A minor in manual training consisted of a minimum of eighteen term hours or a maximum of thirty-six term hours. A major must have a required thirty-six term hours of education.<sup>9</sup>

In 1923 the enrollment chart (See Chapter V) shows 116 class cards. A list of the courses offered in the

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<sup>8</sup>North Texas State Teachers College, Bulletin, LXXVII (July, 1923), 57.

<sup>9</sup>Ibid.

year 1923, each valued at three term hours, is given below.

Mechanical drawing  
 Machine drawing  
 Advanced machine drawing  
 Bench work  
 Cabinet making  
 Wood turning and pattern making  
 Architectural drafting  
 Architectural drafting  
 Architectural drafting  
 Foundry  
 Cement and house construction  
 Blacksmithing  
 Freehand drawing and design  
 Furniture design  
 Advanced furniture design  
 Problems in elementary wood work  
 Problems in advanced wood work  
 Vocational wood work

The curriculum in the manual training department had no changes in 1924. In 1925 the name of manual training was changed to industrial arts. There was a course of study started this year that was called industrial education and industrial arts was one of the divisions of the industrial education program.<sup>10</sup> There were four divisions in industrial education. There were no changes in the curriculum in 1925. Foundry and blacksmithing were dropped from the curriculum in 1926.

Three courses were added in 1927 dealing with the subjects usually taught in the junior high school. The three courses were entitled junior high acquaintanceship courses. In 1928 and 1929 there were no changes in the curriculum of

the department. In 1930 there were three new courses offered to the students majoring in industrial arts. They were on organization, administration and supervision of industrial arts programs varying from small high schools to large city systems.

In the curriculum three advanced courses were added in 1931. These were in wood working and metal. Three advanced drawing courses were also added this year. An advanced course in electricity was added to the curriculum also. The curriculum in the industrial arts department was the same in 1932 as it was in 1931. A course in construction work in primary and elementary schools was added to the curriculum in 1933. Two of the courses in general shop were combined and only two courses were offered instead of three. Also added this year was the history and philosophy of industrial arts.<sup>11</sup> The units a student needed to determine a major or minor field, or to graduate had been in "term hours," but in 1933 all calculations were changed to "semester hours." All the courses offered in the department had been three term-hour subjects; now each became a three-semester hour course.

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North Texas State Teachers College, Bulletin, CII (June, 1933), 30.



In 1933 William Joseph McConnell was elevated from the office of dean to the presidency of North Texas State College. The course of study for industrial education had three divisions: mechanical drawing, shop work, and printing. Those students majoring in typography were required to take courses 131-132, 133-134, 137-138, 237-238, 333-334, and 431-432.<sup>12</sup> Those majors not specializing in typography were required to take courses 131-132, 133-134, 231-232, 234, 236, 333-334, and 431-432.<sup>13</sup> Both majors had to have a minimum of thirty-six semester hours to major in industrial education. Each major was advised to select the electives of either Industrial Arts 200 (Constructive Work in Primary and Elementary Schools) or Education 422-423 (Visual Aids). This assured the students of obtaining a practical knowledge of some of the modern teaching devices and a social and industrial background necessary for the teaching in the fields of industrial education. Courses from the fields of economics, history, physical education, and sociology were recommended. Listed below are the courses offered in the industrial education department.

- 131 Mechanical drawing
- 132 Mechanical drawing
- 133 Bench work
- 134 Cabinet work
- 137 Elementary printing
- 138 Advanced printing

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<sup>12</sup> North Texas State Teachers College, Bulletin, CII (June, 1933), 95.

<sup>13</sup> Ibid., p. 95.

- 200 Construction work in the primary and elementary schools
- 205 Wood carving
- 231 Architectural drawing
- 232 Architectural perspective
- 234-236 General shop work
- 237 Elementary linotype operation
- 238 Advanced linotype operation
- 333 Methods of teaching industrial arts
- 334 Vocational guidance and leadership
- 431 The history, philosophy, and organization of industrial arts
- 432 The administration and supervision of industrial arts

Bookbinding and lettering were added in 1935. Two drawing courses were also added to the curriculum of the industrial arts department.

Bookbinding was given another course in 1936; also, another course in drawing was added. Industrial arts design, furniture design, and architectural details were added. Machine drawing and design was added along with two junior high school problems courses in industrial arts. In addition, two advanced problems courses for industrial education were added to the curriculum. An arts and crafts course was added along with an advanced metal work course. In 1937 only one course was added to the curriculum. It was a study of industrial arts for the handicapped children. The two courses in industrial educational problems were dropped in 1938. Development of shop projects and instruction aid and design and construction of shop tools and equipment were added. Applied electricity was added to the curriculum in 1939. The industrial arts curriculum now consisted of more than thirty-four

courses. General crafts was offered in 1940 to the large curriculum of the department. In 1941 woodcarving was dropped from the curriculum. A course in shop care and management was added. Two special problems courses were also added this year. Two courses in farm shop were added to the curriculum in 1942. Also added this year were courses in aircraft sheet metal and welding.

One course in lettering and two courses in mechanical drawing were dropped from the curriculum in 1943. Aircraft sheet metal and welding had been added the year before, and this year glider construction was added. This course was added in order to aid in the repair of airplanes damaged during the war. Industrial arts courses were offered in 1944 to serve two purposes: (1) to prepare students to teach industrial arts in the public schools, and (2) to give students in other departments an opportunity to supplement work in their chosen fields.<sup>14</sup>

A major in industrial arts had to complete twelve semester hours in each of three fields: drawing, metal, and wood. This was a total of thirty-six semester hours plus three semester hours, or industrial arts 344 and 410 H if a permanent certificate was desired. The major in industrial arts was advised to select his minors from the departments of physical

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education or mathematics.<sup>15</sup> Industrial Arts 200 (Shop Work for the Elementary School) was offered for those students who were interested and majoring in elementary education. It did not require prerequisites.

The following program was suggested for the industrial arts major:

Freshman Year

Industrial Arts 131-132  
Industrial Arts 121-122

Sophomore Year

Six hours selected from  
Industrial Arts 231-232  
Industrial Arts 234-236  
Industrial Arts 244-246

Junior Year

Industrial Arts 313, 314, 315, or 317 if  
Industrial Arts 244-246 had been completed  
Industrial Arts 311, 300, or 305 if Industrial Arts 234-236 had been completed  
Industrial Arts 331-332 if no courses in drawing had been completed

Senior Year

Industrial Arts, six hours advanced, to be selected from courses listed under the Junior Year. 16

There were some thirty-eight courses listed in the 1944-46 College Bulletin. These courses are listed as follows:

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<sup>15</sup>  
Ibid.

<sup>16</sup>  
Ibid.

Exploratory shop  
 Bench metal work and forging  
 Farm shop  
 Farm shop  
 Mechanical drawing  
 Mechanical drawing  
 Elementary printing  
 Advanced printing  
 Shop work for the elementary school  
 Design in industrial arts  
 Architectural drawing  
 General sheet metal  
 General welding  
 Elementary linotype  
 Advanced linotype  
 General bench wood work and elementary pattern  
 making  
 Woodworking: Glider construction and repair  
 Machine cabinet construction  
 Dopes and fabrics in glider construction  
 General aircraft sheet metal  
 General aircraft welding  
 Machine shop  
 Advanced machine shop  
 General crafts  
 Shop care and management  
 Detailed project drafting  
 Furniture design and architectural detail  
 Methods of teaching industrial arts  
 The history and philosophy of industrial arts  
 Administration and supervision of industrial arts  
 Junior high school problems in industrial arts  
 The development of shop projects and instructional  
 aids  
 Design and construction of shop tools and equipment  
 Special problems courses.

In 1946 safety engineering and auto mechanics were offered for the first time. Shop mathematics had not been offered before this year. The courses that had involved aircraft and gliders had been dropped from the curriculum. Courses in advanced sheet metal and air conditioning were begun this year. A course in pipe and tube welding was also offered in 1946, as well as a course in jig and template

making. Four courses in industrial plant experience were also started in 1946. A thesis seminar in industrial arts was offered for the first time.

In 1947 there were no changes in the curriculum of the industrial arts department. Foundry was added in 1948 along with a course in elementary crafts. Another course in architectural drafting was also begun.

In 1949 carpentry was added to the curriculum of the industrial arts department. Design was added to the curriculum again this year, also with a course in upholstery and finishing. A course in the study of materials of industry was also added in 1949.

In 1950 another course in auto mechanics was offered for the first time. There were three more courses offered in the drafting department. These courses were in map, advanced sheet metal, and advanced architectural drafting. From 1951 to 1954 there were no changes in the curriculum of the industrial arts department.

The Bachelor of Science degree with a major in industrial arts was granted upon completion of fifty-four semester hours.<sup>17</sup> Forty-five of the fifty-four semester hours must be in laboratory courses with a minimum of nine hours each in the following phases: (1) drawing, (2) metal, and (3) wood work.<sup>18</sup> The following courses were required of

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<sup>17</sup>North Texas State College, Bulletin, CCXLIII (February, 1953), 236.

<sup>18</sup>Ibid.

all students who planned to major in industrial arts and to fulfill the requirements for a teaching certificate:

Drawing	Industrial Arts 131, 132, 331
Metal	Industrial Arts 122, 125, 234, or 236
Wood	Industrial Arts 121, 126, 246 also Industrial Arts 137, 315, 431, 245.

Those students who expected to teach industrial arts took Industrial Arts 334, Methods of Teaching Industrial Arts and did their practice teaching, Education 410H, under the supervision of an industrial arts teacher.

A minor in industrial arts had to complete twenty-seven semester hours with the following courses:

Drawing	131, 132
Woodwork	121, 246
Metal work	122, 125
Crafts	315

plus six other advanced semester hours of laboratory courses.

In addition to the courses listed above, the minor in industrial arts must complete Industrial Arts 334 as one of the courses in education.

A list of the courses offered in the 1954 College Bulletin shows some fifty-seven courses. These are listed below.

- 121 Exploratory woodwork
- 122 Bench metal work and forging
- 123 Farm shop
- 124 Tractors and farm machinery
- 125 Foundry work and introductory machine shop
- 126 Principles of carpentry
- 131 Mechanical drawing
- 132 Elements of machine drafting
- 137 Elementary printing
- 138 Advanced printing
- 200 Wood shop for the elementary school
- 213 Introductory craft work
- 220 Safety engineering

- 230 Architectural details
- 232 Architectural drawing (home planning)
- 234 General sheet metal
- 236 General oxy-acetylene welding
- 237 Elementary linotype operation
- 238 Advanced linotype operation
- 239 Automobile repair shop
- 241 Automobile mechanics
- 244 General bench woodwork and upholstery
- 245 Shop mathematics
- 246 Machine cabinet construction
- 300 Advanced sheet metal and air conditioning
- 305 Pipe, tube, and electric welding
- 311 Machine shop
- 313 Advanced general woodwork
- 314 Elementary electricity
- 315 General crafts: plastics and leatherwork
- 317 Shop care and management
- 331 Sheet metal drafting
- 332 Machine drafting
- 334 Methods of teaching industrial arts
- 335 (A or M or S) pattern and detail drawing
- 337 Advanced machine drafting
- 338 Advanced sheet metal drafting
- 339 Map drafting
- 405 Design in industrial arts
- 410 Advanced general welding
- 416 Upholstery and finishing
- 420 Advanced general machine shop
- 431 The philosophy of industrial arts
- 432 Administration and supervision of industrial arts
- 490-491 Special problems
- 533 Junior high school problems in industrial arts
- 535 Selection and organization of subject matter
- 541 Research techniques and procedures in industrial arts  
education
- 540 A study of tools and materials of industry
- 551 The development of shop projects and instructional  
aids
- 552 Design and construction of shop tools and equipment
- 556-557 Industrial plant experience
- 590-591 Special problems courses
- 595 Thesis seminar in industrial arts.

The course in auto mechanics was dropped for the time being when the temporary building in which the shop was housed was torn down to make way for the new girls' dormitory, Kendall



Hall. It is hoped that the course will be resumed as soon as a new building for industrial arts is constructed.

## CHAPTER IV

### HISTORY OF THE INDUSTRIAL ARTS DEPARTMENT

It would seem logical to first give the different names by which the college has been known. In 1890, what is now called North Texas State College was approved and leased to J. C. Chilton as a private normal school, and was then called North Texas Normal College. In 1901 the Twenty-seventh Legislature appropriated annual funds to support the school. At this time the school had been located in Denton some eleven years with the name North Texas Normal College. Then in 1923 the Thirty-eighth Legislature changed the name to North Texas State Teachers College.<sup>1</sup> It remained so until the Fifty-first Legislature changed the name of the school to North Texas State College with a separate governing board in 1949.<sup>2</sup>

Not only did the college have several different names, but the Industrial Arts Department has also had different names. The first name the department had was the Manual Training Department under the direction of C. A. Tripp in 1910. This department was so called until 1925 when the name

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<sup>1</sup>North Texas State Teachers College, Bulletin, XCI (June, 1929), 31.

<sup>2</sup>North Texas State College, Bulletin, CCII (February, 1953), 41.

was changed to the Industrial Education Department. The course of study for the Industrial Education Department, as it was then called, was divided into four divisions. One of the divisions was dropped from the department in 1926. The department was known under the same name until 1939 when the name was changed to the Industrial Arts Department. Since 1939 the name of the department has remained the same.

North Texas State College was expanding in the fall of 1910 when the manual training department was set up in the basement of the old Chemistry Building.<sup>3</sup> The department remained in this building until the Manual Arts Building was finished in 1915. The Manual Arts Building was erected for the teaching of manual training and home economics. The department was housed in this building until 1923. The wood and metal courses were moved to the new addition of the power plant at this time. The printing and drafting classes were still held in the Manual Arts Building.

After World War II the Industrial Arts Department was put in three buildings. In the power plant, wood classes were taught. A metal shop was built for the teaching of courses in metal work. An army barracks housed the offices and the drafting classes. The college's building program was expanding at this time and in 1949 the Union Building was finished. Since the new Union Building housed the post office,

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<sup>3</sup> Personal interview with C. A. Tripp, July 22, 1954.

the Industrial Arts Department moved into the old post office building for its offices and one lecture room. Printing had been taught in the basement of the Manual Arts Building until the Journalism Building was finished in 1949. At that time printing was moved to its new quarters.

When the manual training department was set up in 1910 no degree or teaching certificate was offered for manual training. In 1912 a student of manual training could get a teaching certificate after completing the prescribed courses. This had to be a total of sixty units with nine completed units of manual training. A unit was estimated as being sixty recitations of forty-five minutes each.<sup>4</sup>

In 1914 a new four-year course of study was begun at North Texas. The work was still estimated in units, with the definition of unit changing to four recitations of forty-five minutes each. Nine units were still required for the four-year course of study in manual training. For completing the prescribed work in the four-year course the student received a permanent teaching certificate. In 1917 North Texas State College offered a Bachelor of Science degree in manual training. Since that time there have been some 732 students who have completed the requirements for the bachelor's degree in industrial arts.

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<sup>4</sup> North Texas State Normal College, Bulletin, LXVIII (July, 1921), 26.

The requirements for a Bachelor of Science degree in Industrial Arts have changed through the years. When the Bachelor of Science degree was first offered in 1917 the college was divided into different colleges, the junior college and the senior college. In the junior college the student had to complete nine units in his major field with a total of sixty units to complete the junior college. For completing this work the student received a teaching certificate. The student could then go to the senior college, complete twelve additional units in his major field plus thirty-six additional units for his Bachelor of Science degree. With a Bachelor of Science degree the student would have completed a total of one hundred and eighty units.

Since 1910 the work at North Texas State College had been estimated in units. Then in 1918 the unit was changed to term hours. The term hour was defined as one recitation per week (or its equivalent) for one term of twelve weeks, requiring two hours of preparation on the part of the average student for each recitation.<sup>5</sup> A major consisted of a minimum of thirty-six term hours or a maximum of fifty-four term hours. A minor consisted of eighteen to twenty-seven term hours. For a degree a student must have a major, a first minor and a second minor. Thirty-nine term hours of manual training were

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<sup>5</sup> North Texas State Normal College, Bulletin, LVII (July, 1918), 13.

required. A total of one hundred and eighty term hours were needed for a bachelor's degree. In 1927 the number of term hours recommended for a bachelor's degree in industrial education was fifty-four.

From 1931 to 1933 students in the Industrial Education Department could specialize in mechanical drawing or shop work. In each course fifty-four term hours were required for a Bachelor of Science degree.<sup>6</sup> Basically those courses of study were the same for a major specializing in shop work. In 1933-1934 the two different courses of study were combined. The student did not specialize as far as a course of study in the department was concerned, although it was possible for the student to do so. The degree requirements had been cut to thirty-six semester hours of completed work. The completed work, until the fall of 1933, was estimated in term hours. At this time the term "term hour" was changed to "semester hour."<sup>7</sup> The total requirement to this date had been one hundred and eighty term hours. With the change from "term hours" to "semester hours" the requirement dropped to one hundred and twenty-four semester hours. The semester hour was defined as one recitation hour a week (or its equivalent), with two hours of preparation for each recitation hour for a period of eighteen weeks. The term hour is the equivalent of two thirds of a semester hour.

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<sup>6</sup>North Texas State Teachers College, Bulletin, XCVI (June, 1931), 82.

<sup>7</sup>North Texas State Teachers College, Bulletin, CII (June, 1933), 30.

From the fall of 1933 until the fall of 1936 students in the Industrial Education Department were required to take thirty-six semester hours for a degree with no specializing. In the fall of 1936 a student could again specialize in one of three divisions in the department. These divisions were woodworking, metal, and drawing. Specialization continued until the fall of 1939 when again it was dropped with the student now required to take thirty-nine semester hours in the department for a Bachelor of Science degree. The requirements of the Industrial Arts Department remained the same until the fall of 1946 when the department required each student majoring in industrial arts to take fifteen semester hours in each of the three fields listed. These fields were drawing, metal, and wood. In addition to the fifteen semester hours in each of the three fields, Industrial Arts 220, 245, and 431 must be completed. (See chart in Chapter V for name of course.) This made a total of fifty-four semester hours for a Bachelor of Science degree in industrial arts.<sup>8</sup> This requirement has remained constant in the department to this date.

In 1936 the Master of Science degree was offered to those students with a Bachelor of Science degree, or its equivalent. The student must complete twelve semester hours in his major field, exclusive of the thesis. The student must also complete twelve semester hours in a minor field. The thirty semester

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<sup>8</sup>North Texas State Teachers College, Bulletin, CLIII (March, 1944), 166.

hours must be completed with no grade below "B". Students in the Industrial Arts Department were able to complete this work under the Education Department and their theses were written under the supervision of the Industrial Arts Department. It was not until 1946 that a Master of Science degree could be completed in the Department of Industrial Arts,<sup>9</sup> ten years after the Master of Science degree was first offered in the college. The work on the Master of Science degree has to be completed in a five-year period. During World War II this ruling was relaxed enough so that time spent in the armed services was deducted or extended for the period in service. For example, if a student had spent one year working on the master's degree or any part thereof, and then spent four years in the armed service, he would be allowed four additional years in which to return and complete the requirements for the degree.

The student working on a Master of Science degree could receive his degree with an average of "B" for his thirty semester hours in 1948. However, no grade below a "C" was accepted by the Graduate School.

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<sup>9</sup> North Texas State Teachers College, Bulletin, CLXXV (May, 1946), 47.



## CHAPTER V

### ENROLLMENT IN THE INDUSTRIAL ARTS DEPARTMENT

At the turn of the century the trend in general education was to include industrial arts in the curriculum of most of the larger schools. The larger schools with a large enrollment could justify the expense of setting up industrial arts shops. With the increase of the scholastic population more and more schools put industrial arts into their curriculum. The increase of shops at the high school level caused teachers' colleges to offer industrial arts to those people who wished to teach industrial arts. The Thirty-first Legislature passed a bill in 1909 appropriating the money to the normal schools then in existence for the purpose of setting up shops in which to train teachers. With this aid the department was started at North Texas State College.

Using existing records in the Industrial Arts Department, an enrollment chart was made. Records and an interview with S. A. Blackburn were used as a basis for the figures and statements made in the following paragraphs.

Figure 1 shows the enrollment in the Industrial Arts Department from 1911 through the spring semester of 1955. The enrollment was small in the beginning of the department. The department started with an enrollment of 102 in 1910.

# INDUSTRIAL ARTS DEPARTMENT ENROLLMENT CHART

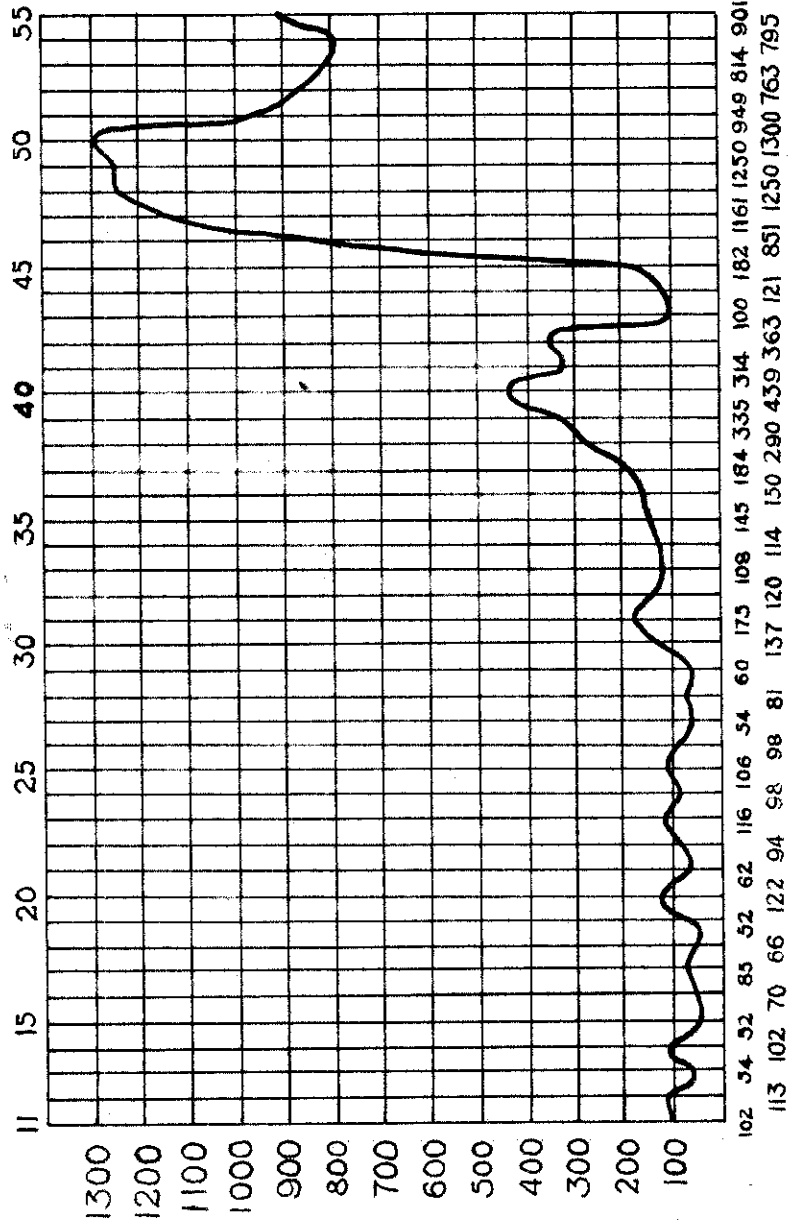


Fig. 1--Enrollment chart

The enrollment was on the rise until 1914. In 1915 it dropped to fifty-two. This is the smallest enrollment the department has had. It was duplicated in 1919 which marked the end of World War I.

During the years of World War I the enrollment had an average of about seventy-four students per year. This was considerably lower than in World War II, as will be shown later in this chapter. After World War I the enrollment again rose to the pre-war figures. This enrollment continued until 1927 when it dropped from ninety-eight students in 1926 to a mere fifty-four in 1927. This was only two students above the record low of fifty-two in 1915 and 1919. There seems to be no way of explaining the drop in enrollment for the period between 1927 and 1929, the average enrollment for that period being sixty-seven students per year, unless the recession period before the depression could account for the drop. During the depression years the enrollment of the department was well above the one hundred mark. In 1930 a rise in enrollment began in the department and it continued until 1943. During those thirteen years the department's enrollment increased from 137 in 1930 to its peak of 439 students in 1940, 314 in 1941, and 363 in 1942.

The beginning years of World War II caused war-time industrial plants to want trained workers in sheet metal, drawing, glider construction, welding and many other

occupations. The curriculum of the industrial arts department added the courses to the already expanded curriculum to meet the defense needs of the country. Night classes were offered to students not regularly enrolled in the college. There were also extension courses in industrial arts. These demands on the department were fulfilled by the end of the spring semester of 1942. Having fulfilled the demands for the defense of the country, the department experienced a decided fall in the enrollment in 1943. The enrollment dropped to a mere 100 which was a loss of 263 students in one year.

The decrease in the enrollment lasted only during the year 1943. In 1944 the returning of wounded veterans caused an increase of twenty-one students, with more coming in 1945 which brought the enrollment up to 182. After the war was officially over in 1946, the enrollment in the department increased some 669 students to give the department the largest enrollment in its history--851 students. This enrollment was over twice the 1940 enrollment of 439 students. The next four years saw the enrollment rise to its highest peak. In 1950 there were 1300 students enrolled.

After the record enrollment in 1950 there was a decrease to 949 in 1951, to 793 in 1952, and to 814 in 1953. In 1954 the enrollment was 795 and this seemed to be the end of the decline in the record enrollments caused by the returning

of the World War II veterans. At the end of the spring semester of 1955 there had been 901 students registered for courses in industrial arts. It seems that the enrollment of the department has reached a leveling off period in its enrollment since the record enrollment of 1950, although the Korean War did cause some increase in students during the 1954-1955 school year.

Bachelor of Science degrees have been given in Industrial Arts since 1919. Figure 2 shows the number granted each year since that date. Teaching certificates were given to a student who had completed the required courses before 1917. This was the first year that the Bachelor of Science degree was offered at North Texas State College. Figure 2 also shows that the rise and fall of graduates coincide with the rise and fall of the enrollment in the department as noted in Figure 1.

Figure 3 shows that the first master's degree was granted in 1936. The degree was not strictly a Master of Science degree in Industrial Arts, since the department had not yet been designated as one to grant the advanced degree. In 1944 the department was privileged to grant the Master of Science degree in Industrial Arts. However, included in Figure 3 are Master of Science degrees with majors in Education granted up to 1944, with theses concerned with industrial arts subjects. These students were listed as education majors and their theses were supervised by instructors in education.

**INDUSTRIAL ARTS DEPARTMENT  
B. S. DEGREES BY YEARS 1917~55**

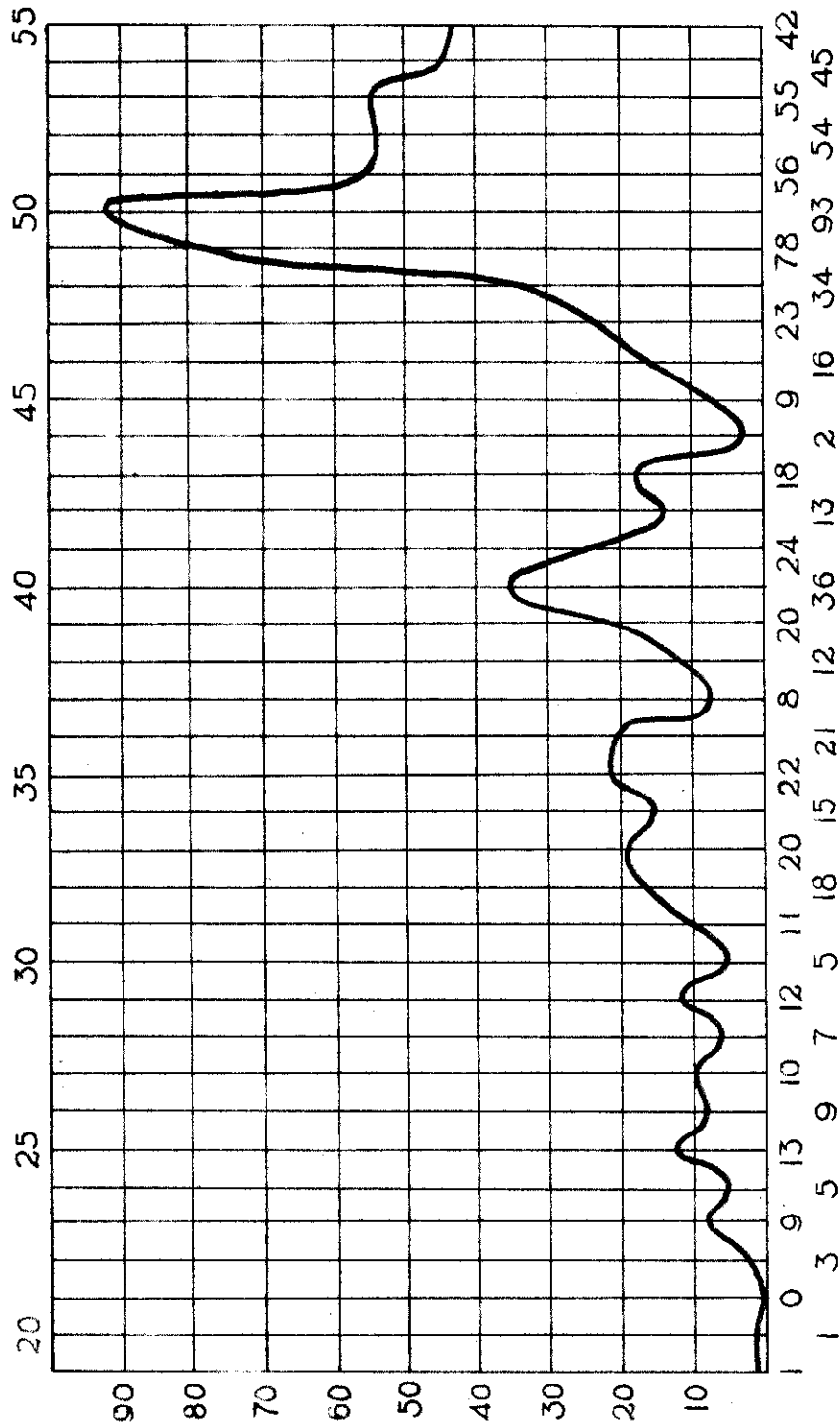


Fig. 2--Number of Bachelor of Science degrees

# NO. OF M.S. DEGREES IN INDUSTRIAL ARTS BY YEARS 1935~55

NO. OF M.S. DEGREES 116

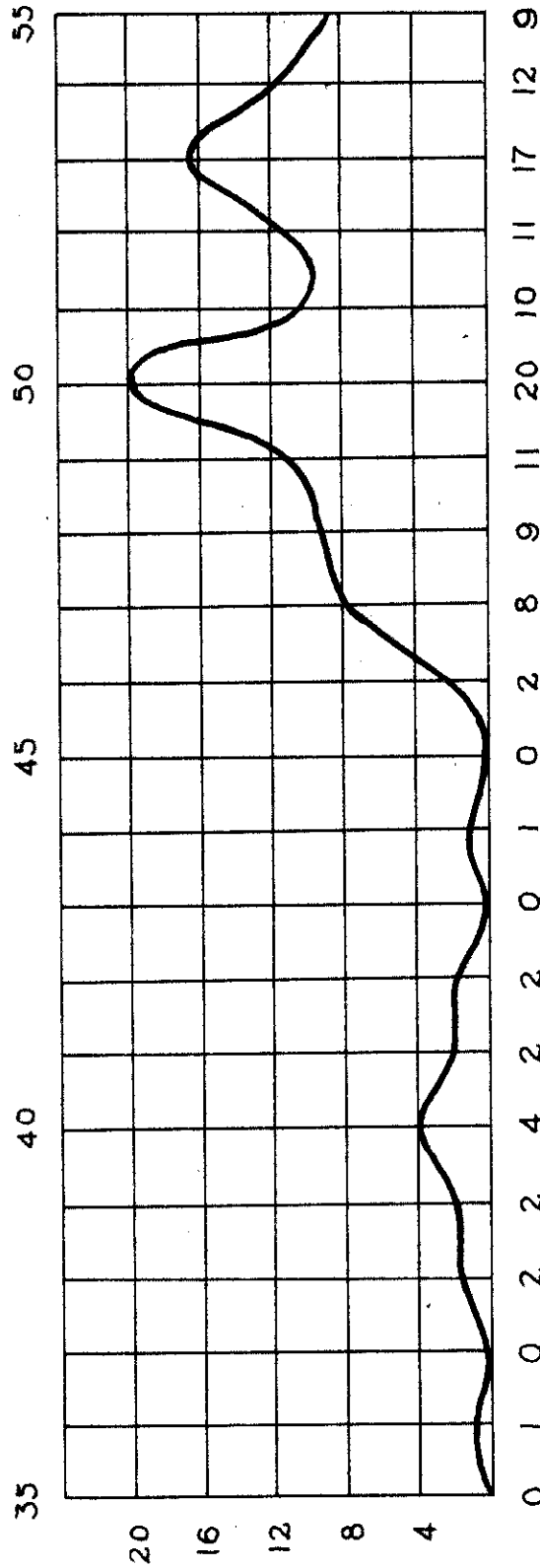


Fig. 3--Number of Master of Science degrees

However, the students had twelve semester hours in education, twelve semester hours in industrial arts and wrote their theses on some subject in industrial arts. Since 1944 the theses have been written under the supervision of the members of the faculty of the Department of Industrial Arts.

Figure 3 also shows the rise and the fall of the number of graduates, as does Figure 2. Both Figure 2 and Figure 3 seem to coincide with Figure 1. Apparently, the number of majors in industrial arts for the Bachelor of Science degree and the number of majors in industrial arts for the Master of Science degree are in direct proportion to the enrollment.

Figure 4 shows the enrollment in industrial arts by divisions of the three main laboratory courses--wood, metal, and drawing. This figure also shows that the enrollment in these divisions coincides with the enrollment of the department, with the number of bachelor's degrees given, and also with the number of master's degrees given to students of the industrial arts department.

It is apparent from Figure 4 that drawing is increasing, while the division of wood is decreasing. The enrollment in the division of metal is increasing--probably a natural consequence--since the scarcity of wood has become acute and metal is being used more and more to replace wood.



# ENROLLMENT BY DIVISIONS SINCE 1935

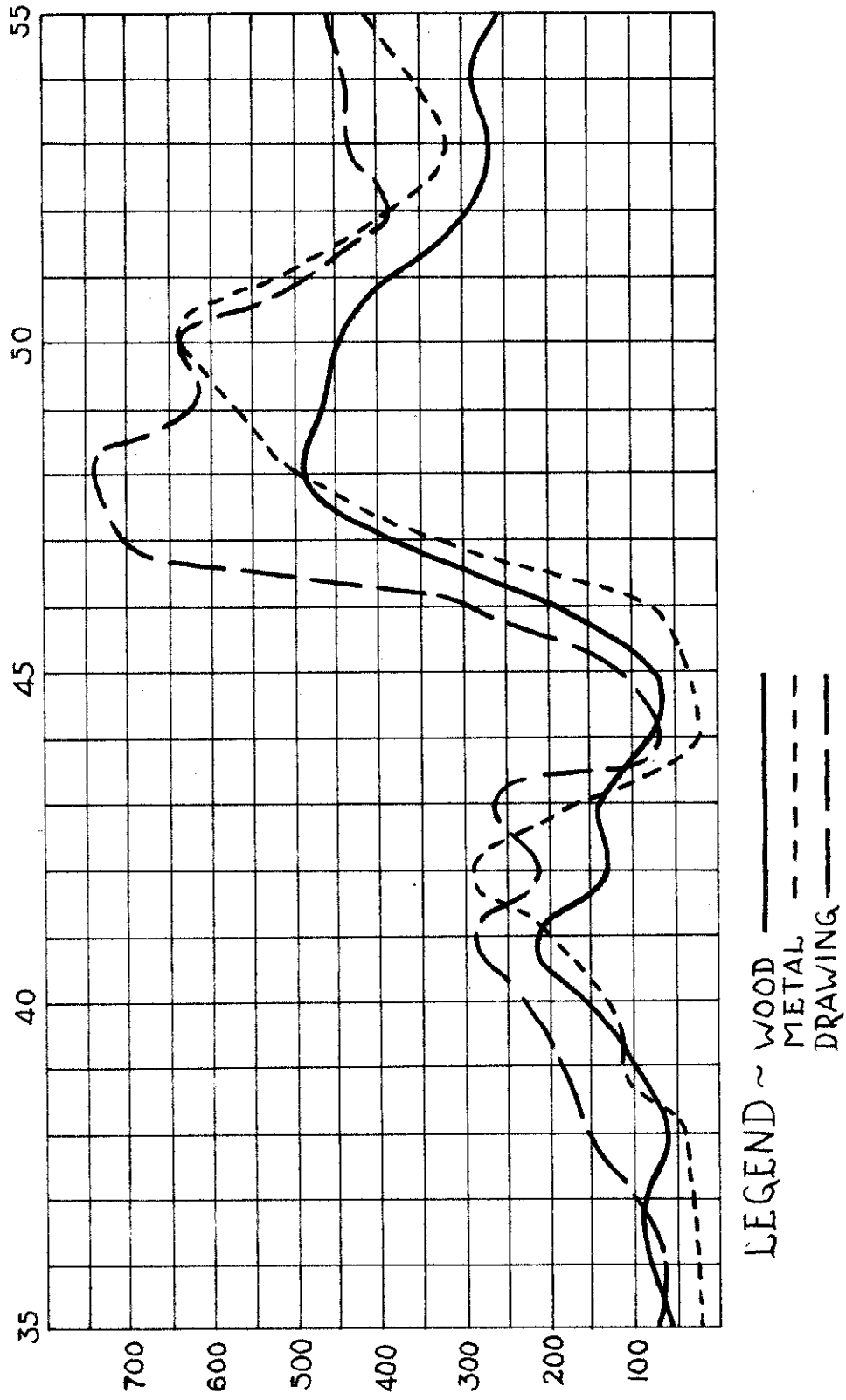


Fig. 4--Enrollment by wood, metal, and drawing

Below is a list of the Bachelor of Science degrees earned by industrial arts majors in the Industrial Arts Department since 1927. This is a partial list of the graduates as degrees were conferred to majors of this department since 1919.

## 1927

Allgood, Conrad R.

Hundley, Ray

Keene, A. R.

McCleskey, Robert W.

## 1928

Bandston, James H.

Barr, Johnnie H.

Hutson, Claude W.

Kallina, Henry E.

Lee, Eugenia T.

Swenson, Elliott W.

Underwood, Fredric R.

## 1929

Huffaker, Herbert H.

Stroup, Francis E.

Beck, Johnny Addie

Cullers, Jesse E.

Davis, Kenneth E.

Landreth, Arthur J.

Lee, Roy S.

McKinney, Ruby L.

Patrick, Wallace D.

Peters, Charles P.

Smith, Carroll B.

Vaughan, Horace B.

## 1930

Malone, Oneal J.

Norman, Charles H.

Pruett, Homer N.

Thompson, Craig C.

Howorth, Tom

## 1931

Caruthers, Guinn  
 Ford, Chauncy J.  
 Woodruff, George T.  
 Perryman, Ray G.  
 Sutton, C. M.  
 Watson, Johnie W.

Corse, Chancey H.  
 Pierce, Wilford E.  
 Knoll, B. W.  
 Renfro, Wirt R.  
 Tompkins, Alex

## 1932

Bates, R. L.  
 King, T. W., Jr.  
 Simpson, Lee E.  
 Stearns, Paul D.  
 Baker, Fred  
 Geer, Dolphus O.  
 King, Lawrence C.  
 Lovelace, Charlie C.  
 Perkins, William F.

Hammer, Garland G.  
 London, Robert H.  
 Smith, Raymond H.  
 White, Zack  
 Bryant, Ward H.  
 House, Joseph T.  
 Knight, James R.  
 Martin, Iva F.  
 Uselton, Wesley E.

## 1933

Cain, Bradley  
 Pearson, J. T.  
 Reader, Truman  
 Seay, Clare L.  
 Bell, Jesse B.  
 Davis, Walter T.  
 Howell, Clarence T.

Horton, Henry A., Jr.  
 Powell, H. J.  
 Roper, Homer L.  
 Wells, J. Haskin  
 Bradford, Theo  
 Duncan, Robert W.  
 Huckabee, Cleo O.

Jones J. T.  
 Myers, Oliver W., Jr.  
 Rice, Arthur C.

Klingman, George R.  
 McLeroy, Reuben I.  
 Sloan, Everett M.

## 1934

Boyd, Louis M.  
 Cowart, Raymond N.  
 Bagwell, Charley E.  
 Fagg, Clyde L.  
 Howell, Robert J.  
 Manire, Charles O.  
 Sills, Robert M.  
 Windham, William P.

Conaway, Bryant W.  
 Antwiler, Dell  
 Corbin, John S.  
 Frole, James R.  
 Jones, Charles L.  
 Richards, Jeff W.  
 Smyers, John O.

## 1935

Hamilton, Tom G.  
 King, Ferdinand  
 Perryman, J. W.  
 Tyson, Kenneth M.  
 Boswell, Jefferson M.  
 Ferguson, Charles C.  
 Guffee, Clarence  
 Miller, William L.  
 Nicholas, Carl  
 Ramsey, C.B.  
 Smith, Earnest H.

Jackson, Carroll  
 Lamb, Jack J.  
 Turpin, Walter S.  
 Barton, Charlie A.  
 Dunn, U. J.  
 Foster, Charles H.  
 Love, Rodney C.  
 McGuire, Owen M.  
 Polser, Barney  
 Rhodes, B. T.  
 Sparks, Jonnie B.

## 1936

Cox, Tom M.

Cross, Francis C.

Jones, Dello  
 Walker, Leonard K.  
 Bennett, Leonard D.  
 Browning, Voyd  
 Connors, Winston  
 Kee, Jim W.  
 Shults, James T.  
 Stevens, Marvin A.  
 Tompkins, Walter T.  
 Banks, Herman

Redfield, Glen A.  
 Barrick, Luther O.  
 Browder, Lowell L.  
 Coleman, Ralph M.  
 Gammon, Roy A.  
 Ramsey, Lewis S.  
 Standifer, William S.  
 Thompson, Sam H.  
 Walters, Charles H.

## 1937

Cherry, Harvey L.  
 Gipe, Otho J.  
 Powledge, Leonard R.

Foster, Linze Y.  
 Bales, Raymond D.  
 Wharton, Azel S.

## 1938

Dickenson, Orval G.  
 Burnley, Al. T.  
 Farmer, J. Harold  
 Greer, William D.  
 Kelley, Homer  
 Titus, Lewis G.

Ball, Malcolm G.  
 Cowan, Dennis E.  
 Gammon, Lelan E.  
 Heath, Clyde R.  
 Miller, John H., Jr.

## 1939

Davis, Alvin R.  
 Ferguson, Carl N.  
 Wilborn, James D.  
 Adams, Linard W.

Dawson, Cloyd H.  
 Fincher, Howard H.  
 Whittenberg, Glenn  
 Adkins, Lain

Amerndson, Arthur J.  
 Denson, George T.  
 Jordan, William M.  
 Martin, Gebhard  
 McHahon, Robert L.  
 Scarbrough, Luther C.

Cooper, Albert B.  
 Hollis, David P., Jr.  
 Kee, Vernon  
 McCain, Jerry C.  
 Pentecost, Robert E.  
 Thompson, Clifford H.

1940

Boswell, Marshall H.  
 Griffith, Tom J.  
 Layne, Herbert M.  
 McCurley, Glenn S.  
 Reeves, Otis J.  
 Stewart, Justus H.  
 Winder, John A.  
     Beams, Edmond E.  
 Buttrill, Sidney E.  
 Churchwell, Luther W.  
 Gale, John G.  
 Isbell, Kaaner R., Jr.  
 Jones, Dudley  
 Kennedy, Edward C.  
 McKinney, Horace D.  
 McSpadden, C.B., Jr.  
 Reynolds, Floyd R.  
 Snodgrass, Joe F.

Dyche, Ray M.  
 Klein, Melton T.  
 McCain, Horace K.  
 Pate, Raymond E.  
 Sorrels, Leslie E.  
 Usry, Raleigh S.  
 Anderson, Ward C.  
 Breedlove, Tom S.  
 Casteel, Barney P.  
 Clifton, Robert T.  
 Grace, Willie B.  
 Jenson, Joe K.  
 Kelley, Henry  
 Mayes, Bill W.  
 McMichael, Willie L.  
 Pickett, Aubrey D.  
 Smith, Ernest D.  
 Wilks, William W.

## 1941

Casteel, Robert E.	Evans, Arthur C.
Jonette, Orion H.	Kay, Leland O.
Kucharski, Stanley C.	Lee, Sammie W.
Miller, Joe T.	McGuffey, Charles B.
McMath, Jack L.	Ownby, J. W.
Saloman, Virgil	Boyd, Richard L.
Clower, Curtis A.	Culp, Hester E.
Ferguson, Milton	Flanagan, J. W.
Hollaway, Robert R.	Holmes, Walter T., Jr.
Hoover, Vadis H.	Moller, Albert V., Jr.
Nelson, Avery F.	Read, Thomas P.
Riggs, James P.	

## 1942

Dickson, Ralph B.	Karnes, John W., Jr.
Kidd, Virgil M.	Matthews, Garland R.
Money, Homer E.	McMath, James G.
Neale, William S.	Pearce, A. J.
Proffer, Charles W.	Thompson, Louis A.
Woodson, Charles E.	Wylie, Harry V.

## 1943

Graham, Lyman M., Jr.	Parks, Walter B., Jr.
Vaughan, Willie E.	Carr, Carlton L.
Cheatham, Robert B.	Funk, Raymond P.
Gantt, Sam M.	Gibbs, Clifford H.
Graves, Paul M.	Hoeffner, Edwin

James, Albert S., Jr.  
 Mizell, Charles M., Jr.  
 Reeves, Barrett H.  
 Williams, Lucian

1944

Ballew, Oliver B.

1945

Baker, Roy N.  
 Johnson, Thomas B.  
 King, Marvin D.  
 Calhoun, Hugh, Jr.  
 Rollins, Stephen W.

Maakestad, Maurice H.  
 Mugg, Garvin B.  
 Wester, Edward H.  
 Stavlo, Harold V.

Evans, John O.  
 Fry, Roy L.  
 Burns, Ray  
 Loggins, Wilma J.

1946

Denney, Dan W.  
 McMichael, Elby W.  
 Bishop, Alvin C.  
 Mayfield, Pat H.  
 Adams, Bert R.  
 Brooks, Ben S.  
 Duncan, David W.  
 Smith, Ben L., Jr.

McIlvain, Charles T.  
 Robe, Max E.  
 Boaz, Teddy  
 Slaughter, Shula  
 Brenholtz, Gerald S.  
 Byrd, Hoyt G.  
 McCreary, Edwin A.  
 Steele, William H.

1947

Dunn, Hugh A.  
 Jacobs, Aubrey A., Jr.  
 Jones, Roland T.

Cargo, Benjamin R.  
 Johnson, Nick A.  
 Lipscomb, Elwin D.



Matthews, Wayne  
Miller, Ralph W.  
Neale, James A.  
Oliver, Clarence L.  
Smith, Harry L.  
Taylor, Roy M.  
Frymire, William D.  
Blackburn, Imogene J.  
Clower, George E.  
Enderby, David R.  
Gray, Noel O.  
Jordan, Edson D.  
Lyles, Enoch D.  
Neal, Barbara A.  
Polk, Daman W.  
Robinson, James O.  
Shipp, Owen T., Jr.  
Van Zandt, Frank B.  
Williamson, Merrill D.

1948

Greathouse, Charles S.  
Brown, Virgil P.  
Harrison, Davis  
Turner, Finis  
Black, Lawrence  
Canaday, Byron L.

Mikeska, Albert R.  
McKithan, Basil E.  
Nunnally, John H.  
Sanders, William H.  
Spencer, Dave C.  
Wright, Phil W.  
Blackburn, George W.  
Brenholtz, Harold R.  
Emerick, Walter C.  
Evans, William R.  
Honeycutt, Neil  
Lawson, Fred R.  
Matthews, Ludie O.  
Patterson, Leonard H.  
Roberson, Fritz D.  
Shipman, James D.  
Strickland, Richard G.  
Wetsel, Chester W.  
Windham, Pat M.

Nail, Robert L.  
Formagers, Nace  
Myers, Thomas E.  
Vaught, Neeley R.  
Burdette, Robert S.  
Cochrane, Earl A.

Cull, Charles D.	Dawson, Edward C.
Dawson, Julian M.	Dial, Jack P.
Erwin, William R., Jr.	Ezell, Charles E.
Grisham, Wilburn P.	Hardin, Richmond C.
Kiger, Robert V.	Musgrave, Richard A.
Myers, Wallace K.	McLeod, Pat N.
Torgerson, Henry T.	Whitten, Mays K.
Banks, Lelon R.	Belcher, Cecil W.
Bells, Lavada S.	Bryant, Dennis T.
Clement, Billy G.	Cooper, John D.
Crumbley, Ted M.	Hilz, George W.
Knight, Robert E.	Lopez, Lawrence
Lucas, Howard M.	Moss, Lewis M.
Owens, Edward J.	Perry, Weldon R.
Rust, Durward	Spalding, Joe P.
Thompson, Leon A.	Thurman, Jack L.
Wair, Athan H.	Wilkinson, Hooper T.
Wilson, Charles	

1949

Boyd, Charles R.	Brown, Roger O.
Christenson, Bernard F.	Ellis, Calvin C.
Erickson, Arden M.	Grimes, L. A.
Jones, Jack W.	Kamenitsa, William T.
Moley, Sherman A.	McKay, John R.
Reynolds, James H.	Rushing, Irvin M.
Snyder, Ernest C.	Walliser, Jim B.

Yancey, Kenneth W.	Peters, Lowell D.
Anderson, William J.	Barker, Charles D.
Barron, Morris	Belew, Charles R.
Briggs, Cecil L.	Bruns, Lawrence B.
Candler, Billie C.	Fagg, Hugh W.
Gantt, Robert O.	Godwin, Mary E.
Grove, David G.	Hadsell, Jack H.
Hannon, William H.	Hartline, Jimmie H.
Hearn, Howard W.	Hicks, J. M.
Hodges, Robert F.	Houston, William R.
Killingsworth, W. J.	Lanhon, Robert L.
Lawrence, Billie R.	Ludeman, Richard M.
Meeker, Harold O.	Moses, Morgan C.
McAbee, Robert M.	McNutt, Wayland C.
Roy, Walter C.	Selzer, Troy
Stanley, John C.	Suter, Edwin P.
Taylor, Vernon H.	Whiteside, Olen R.
Wilson, Edward B.	Wood, Leslie L.
Orr, Jack K.	Rowlett, John D.
Beaty, Francis E.	Blalock, B. W.
Blum, Clyde W.	Brasher, Samuel T.
Brown, Billy F.	Bynum, Floyd A.
Clark, Billy P.	Emerick, Loyd F.
Fox, James J.	Griffith, Weldon R.
Herrington, Otis H.	Holbert, Wilson
Holbert, Woodrow	Hudspeth, Luke W.

Jeter, James E.  
 Martin, Marvin W.  
 Scott, William J.  
 Steele, Glenn H.  
 Thompson, Edward V.  
 Weatherford, Archie K.  
 Woody, Thomas B.

Largent, Guinn C.  
 Reed, James L.  
 Sikes, Charles R.  
 Sumpter, Robert S.  
 Vaughan, Weldon D.  
 Weseman, Jack W.

1950

Board, Leland E.  
 Brank, Alfred M.  
 Chitwood, John E.  
 Davidson, James B.  
 George, Irby C.  
 Madden, Frank H.  
 Nabors, Benjamin C.  
 Niendorff, James R.  
 Scarborough, Hawkins  
 Scott, Thomas L.  
 Starke, Joseph F.  
 Ball, Bert W.  
 Bonner, Robert J.  
 Budde, Henry A.  
 Cloteaux, Opta P.  
 Collins, A. V.  
 Day, Charles D.  
 Durham, Jack D.

Bradshaw, John F.  
 Casteel, Ruben L.  
 Coleman, John W.  
 Dispenza, Phillip S.  
 Karnes, James B.  
 McKinney, Christine E.  
 Nesbitt, Robert D.  
 Roberts, Robert O.  
 Schroeder, Edwin F.  
 Smith, John N.  
 Toaffe, James J.  
 Binder, Hannan E.  
 Bruce, O. Fred  
 Chester, Clay E.  
 Coffman, Ras. P.  
 Darnell, Byron G.  
 Dickey, John M.  
 Ellingson, Belford T.

Elliott, Kenneth I.  
Ford, Benjamin B.  
Grisham, Gordon A.  
Hendricks, Charles D.  
Love, Charles E.  
Mamula, Emil  
Nalting, Daniel J.  
Patton, Virgil E.  
Plexco, Melvin M.  
Pruett, Lloyd L.  
Roden, John R.  
Spindle, Floyd M.  
White, Harold L.  
Atchison, Jessie E.  
Carter, George T.  
Crain, Charles E.  
Farmer, Harold W.  
Graham, Charles S.  
Harless, Luther H.  
Hartline, Arthur D.  
Hoke, Roy N.  
Magee, Gene L.  
Manire, Cullon D.  
McSween, Colin E.  
Snider, Bennie G.  
Watson, Harold C.  
Embry, Theo L.  
Frasher, John R.  
Harrison, Billy I.  
Hill, Clifford  
Lowe, E. L.  
Metcalf, Theodore S.  
Oringderff, Melvin O.  
Piper, J. Frederick  
Pritchett, Leonard E.  
Ramsey, Henry A.  
Spencer, Ralph E.  
Stringer, James N.  
Williams, Kurz W.  
Boney, William R.  
Cox, Lucius L.  
Desco, John N.  
Ford, Jack D.  
Hardin James E.  
Harrell, Dan T.  
Hoes, Eric M.  
Kovsky, Hyman S.  
Magee, George N.  
Miller, Thomas C.  
Randles, Billy J.  
Spidell, Murray C.  
Williams, William J.

Windham, Joseph W.

1951

Carmichael, Weldon C.

Dyer, Sam

Gann, Wilburn A.

Johnson, George B.

Laney, Guy H.

Nowlin, Jesse E.

Oxner, Harmon V.

Smith, Edward T.

Stark, Harlin W.

Turpen, Jacksonville D.

Wilson, Michael O.

Woodard, Jess

Blair, Thomas C.

Collins, M. James

Falkenberg, Charles E.

Howell, Harlan T.

Lock, Howard M.

Morris, Bobby D.

Scott, Jack D.

Vicari, Felix J.

Allen, Jack C.

Blair, William E.

Glenn, John D.

Markby, Emmett W.

Young, Robert H.

Dyer, Robert

Ford, Hilary B.

Huffhines, James J.

Kelly, Joe G.

Mulkey, Waymon H.

Oatman, Bobby R.

Pollard, Walter J.

Smith, James W.

Treveno, Noe G.

Welch, Thomas

Wood, Glen D.

Wylie, James A.

Cantwell, Joe A.

Compton, Henry A.

Gellys, Clifton W.

King, Henry H.

Moore, Harvey G.

Ooten, Bill

Smith, Joe C.

Younger, Charles L.

Armentrout, George B.

Flanagin, Carroll H.

Kirchner, Forrest E.

Pettitt, Calvin L.

Price, Othal R.  
 Stanton, Michael J.  
 Thompson, James N.

1952

Avery, James R.  
 Bishop, Kenneth E.  
 Fagg, J. L.  
 Holland, Henry E.  
 Rushing, Gerald W.  
 Tully, Eddie G.  
 Watkins, Vaniel W.  
 Withrow, Glynn P.  
 Brod, Willie L.  
 Cruce, William C.  
 David Harold L.  
 Dixon, Harry D.  
 Doyle, Teddy J.  
 Eller, Charles M.  
 Huff, Jack D.  
 Mandeville, Glen A.  
 Simpson, Vaughan D.  
 Williams, Mossis S.  
 Braungardt, George M.  
 Clotiaux, Fred L.  
 Eggleston, Thurston L.

Simmons, Rue  
 Stewart, Billy L.  
 Woods, John W.  
 Bates, Uncas D.  
 Bowman, Woodrow W.  
 Gordon, Billie G.  
 Meeker, Julia J.  
 Stapp, Franklin M.  
 Varley, J. L.  
 Williams, Joe B.  
 Armor, Nancy L.  
 Coulter, William T.  
 Daniels, Jack B.  
 Davis, Willie G.  
 Dixon, Roger E.  
 Edmiston, Fred A.  
 Heldt, James E.  
 Jarrett, Thomas E.  
 Rogers, Eugene  
 Smyth, Aubrey F.  
 William, Robert D.  
 Bronstad, Charles O.  
 Edwards, Donald D.  
 Frederickson, Wade O.

Guest, Edgar A.  
 Kimbro, George T.  
 Parr, Claude E.  
 Ricke, Charles J.  
 Smith, James W.  
 Woodall, Charles J.

1953

Beavers, Gene E.  
 Dorough, Harold L.  
 Graham, Jennings B.  
 Milner, Weeden J.  
 Riddle, R. Charles  
 Schwartz, Edward H.  
 Thompson, Jesse M.  
 Weaver, Allison V.  
 Barrilliaux, Everette J.  
 Deger, Verlyn J.  
 Fowler, Kyle R.  
 Holdridge, Gerald D.  
 Lawrence, Carlton D.  
 Mathis, Albert M.  
 Moore, Charles W.  
 O'Neal, Charles R.  
 Pitts, Robert W.  
 Rike, William F.

Howsley, James A.  
 McDaniel, William M.  
 Payne, Robert F.  
 Schneider, William F.  
 Varley, Roy L.

Belknap, Alfred R.  
 Foster, Robert J.  
 Hudgins, D. K.  
 McCulloch, George T.  
 Rowe, Jimmy L.  
 Stephens, Cyril C.  
 Tocquigny, George J.  
 Baker, Lawrence L.  
 Bell, Bill F.  
 Evans, Roy G.  
 Gault, Wilson J.  
 Kee, Alvis R.  
 Lehrmann, Melvin  
 Miles, Donald E.  
 McCormick, Carey A.  
 Pannell, James O.  
 Rhodes, James W.  
 Tannahill, Lee H.



Woodward, Richard W.  
Davis, Lucian A.  
Echert, Charles E.  
Fuller, James H.  
Hudgins, Wallace R.  
Johnson, Kenneth W.  
Leeth, James C.  
Robertson, Charles F.  
Tyson, Henry K.

Barrett, Freddie L.  
Denman, Cecil R.  
Fowler, Joe E.  
Hatter, Thomas B.  
Jacobs, Morris D.  
Judd, Harold L.  
Pool, Elmer J.  
Thomas, Jack C.  
Wilson, Johnnie W.

1954

Cavender, Ronald G.  
Lockard, Elwyn K.  
Sims, Joe W.  
Thompson, Gerry L.  
Wenzel, Leo G.  
Box, Marshall R.  
Christesson, Billy J.  
Gelter, Murl T.  
Martin, Charles P.  
Parker, Jack E.  
Reames, Bobby F.  
Sizemore, Harvey G.  
Stanley, J. T.  
Willson, David R.  
Bachs, Norman E.  
Booher, Bobby P.

Helton, Howell B.  
McEwin, Homer S.  
Smith, Howard W.  
Vestal, Reagan  
Beckner, Robert F.  
Caton, Jerry C.  
Eden, Johnny F.  
Kellendorf, William N.  
Matthews, Cecil J.  
Queen, Kenneth R.  
Sadecky, Rudolph L.  
Smith, James K.  
Trapp, Roy G.  
Wilson, Frederick M.  
Blair, Charles B.  
Clark, Robert J.

Dodson, Jack H.  
 Hooper, Bervin C.  
 Park, Loran D.  
 Scott, Herbert L.  
 Smith, Don L.  
 Trotter, James M.  
 Wilson, Joe H.

Holland, George L.  
 Kee, John W.  
 Paul, Roy L.  
 Slack, Perry L.  
 Stockwell, Frederick L.  
 Wheelles, James J. H.

1955

Calicoate, Jerry C.  
 Davis, Arlie E.  
 Hruby, Robert L.  
 Mackey, William K.  
 Roberts, Toy L.  
 Wimberly, Billy J.  
 Adams, Delbert  
 Boy, Beemy A.  
 Clay, Shelby D.  
 Dowell, James E.  
 Garrett, Walter A.  
 Grill, Johnny  
 Jenson, Lawrence E.  
 Lucido, Lawrence M.  
 Muckleroy, Harold L.  
 McDonald, Harold L.  
 McGee, Jerry G.

Cox, Doyle L.  
 Hawk, Duane T.  
 Kregel, George M.  
 Pierce, Kenneth T.  
 Royce, Rennell  
 Zackry, Billy R.  
 Barrs, Herman D.  
 Brooks, George A.  
 Cunningham, Kirk  
 Fitzhugh, Howard A.  
 Gillmore, James D.  
 Hanby, Hugh C.  
 Love, Henry L.  
 Mitchell, Donovan R.  
 Murdock, Mackey D.  
 McFarland, Donald J.  
 Norris, Billie B.

Ray, Rex R.	Standifer, Floyd K.
Thompson, Charles H.	Warschun, Walter N.
Wilkinson, Arthur B.	Williams, David A.
Williams, Thomas R.	Wingfield, Billy J.

Below is a list of the Master of Science degrees earned by industrial arts majors through the Education Department and are listed as Master of Science degrees. These degrees were conferred in this manner until 1946.

1936

Lamb, Jack

1938

Hamilton, Tom G.

Karnes, M. Ray

1939

Coleman, Ralph M.

Farmer, J. Harold

1940

Davis, Wallace E.

Ferguson, Charles C.

McCain, Jerry C.

Wellborn, James D.

1941

Bird, Roy

Bush, Zelpha

1942

Martin, Gebhard

Tompkins, Alex

1944

Blanton, Earle B.

In 1946 the Industrial Arts Department was authorized to give Master of Science degrees. Following is a list of those students through the spring of 1955.

1946

Seeley, Emma L.

Wells, J. Haskin

1947

Butler, James A.

Duncan, David W.

Johnson, Nick A.

Karnes, John W.

Money, Homer E.

Nelson, A. Frank

Norris, Lonnie L.

Siddall, Elizabeth

1948

Barrett, L. S.

Beandry, Clayton T.

Bishop, Alvin C.

Jones, Roland T.

Keene, A. R.

McCain, Horace

Sorrels, L. E.

Turner, Finis

Whittenberg, Glenn

1949

Brenholtz, Gerald S.

Erwin, W. R.

Evans, Arthur C.

Graham, L. M.

Greathouse, Charles S.

Hollis, David Pierre

McIlvain, Tom

Matthews, Wayne

Pippin, Carroll B.

Torgerson, Henry T.

White, Alvin M.

1950

Anderson, William James

Boyd, Richard Lee

Christenson, Bernard D.

Cochrane, Earl A.

Dyche, Ray M.

Enderby, David R.

Erickson, Arden M.

Formagus, Nace

Kay, Leland O.

Kiger, Robert V.

Lanham, Robert  
 McSpadden, C. B., Jr.  
 Moses, Morgan Clay  
 Roberson, Fritz D.  
 Shipp, Owen T.

Lewis, Joe L.  
 Matthews, Luxie O.  
 Myers, Wallace K.  
 Rowlett, John D.  
 Wright, Phil W.

## 1951

Anderson, Ward  
 Gantt, Sam M.  
 King, Marvin  
 Lopez, Lawrence  
 Wetzell, Chester W.

Byrd, Hoyt  
 Herring, Arthur B.  
 Knight, Robert E.  
 Vaught, Neeley R.  
 Whitten, Mays K.

## 1952

Ellis, James C.  
 Griffith, Tom J.  
 Lowe, E. L., Jr.  
 Miller, Ralph W.  
 Ritter, John I.  
 Williamson, Merrill D.

Gray, Noel O.  
 Kribbs, Eugene E.  
 McLeod, Pat N.  
 Pritchett, Leonard E.  
 Strickland, Richard D.

## 1953

Blackburn, George W.  
 Bruns, Lawrence D.  
 Cox, Lucius L.  
 Harless, Luther H.  
 Lawrence, Billie R.  
 Rowe, Jimmy  
 Simpson, Vaughn D.

Briggs, Cecil L.  
 Coleman, John W.  
 Dial, Jack  
 Johnson, Thomas B.  
 Ottinger, Sam, Jr.  
 Rushing, Irvin M.  
 Steele, William H.

Suter, Edwin P.

Wylie, Harry V.

Thompson, Leon A.

1954

Baker, L. Lyle

Brank, Alfred L.

Elkins, Bill

Glenn, Robert

Markby, Emmett

Moss, Lewis, M.

Belknap, Alfred R.

Dawson, Julian

Frederickson, Wade

Jeter, James E.

McAbee, Robert M.

Myers, Thomas E.

1955

Brank, Alfred M.

Backs, Norman E.

Jordan, Edson D.

McKay, John R.

Pickett, Aubrey D.

Box, Marshall R.

Sadecky, Rudolph L.

Thompson, Jesse <sup>1</sup>

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1

Existing records in the Office of the Registrar,  
North Texas State College.

APPENDIX

Order of Industrial Arts Faculty  
from 1910-1955

1. Tripp, Clarence A. . . . . 1910-12
2. Vitz, H. J. P. . . . . 1912-35
3. Blackburn, S. A. . . . . 1917-55
4. Woodson, L. Rives . . . . . 1925-27
5. Hall, J. D. . . . . 1927 to present
6. Adams, R. Wayne . . . . . 1937-47
7. Karnes, M. Ray. . . . . 1938-40
8. Farmer, J. Harold. . . . . 1945-49
9. Davis, C. C. . . . . 1940-to present
10. Blanton, Earle B. . . . . 1944 to present
11. Money, Homer E. . . . . 1946 to present
12. Karnes, John W.. . . . . 1946-48
13. McCain, Jerry C. . . . . 1947 to present
14. Nelson, J. Frank . . . . . 1947 to present
15. Sorrels, Leslie. . . . . 1947 to present
16. Roberson, Fritz D. . . . . 1945 to present
17. White, Alvin M. . . . . 1949-51
18. Rowlett, John D. . . . . 1950-51
19. Duncan, David W. . . . . 1950-55
- \* 20. London, H. H. . . . . 1927-31
21. Erwin, Wm. R. . . . . 1950 to present

\*Never a regular faculty member.

C. A. Tripp

Born April 11, 1886, Biglow, Minnesota  
Married and has two sons and four grandchildren.

Instructor of Industrial Arts, 1910-1912.

Formal Education:

Central Michigan Teachers College, 1904-1907, Teaching Certificate.

Purdue University, B. S., 1908.

Professional Experience:

Teacher of manual training at Council Bluffs, Iowa, 1908-1910.

Instructor of Industrial Arts, North Texas State College, Denton, Texas, 1910-1912.

Married Lula Evers, a Denton girl, and has been associated with the Evers Hardware Company interests since he left the college.

Vitz, Hugo John Peter

Born March 3, 1886 in Vera Cruz, Indiana.  
Married and has four children.

Industrial Arts faculty from 1912 to 1935.

In 1951, teaching mathematics in N. R. Crozier Technical High School, Dallas, Texas

Formal Education:

Purdue University, Lafayette, Indiana, B. S. in electrical engineering, 1910.

North Texas State College, Denton, Texas, B. A., 1927.

Southern Methodist University, Dallas, Texas, M. A., 1924.

Professional Experience:

Elementary education, Jackson, Kentucky, 1906-07,  
Elementary education, Bloomington, Illinois, 1910-12,  
North Texas State College, Denton, Texas, 1912-35  
N. R. Crozier Technical High School, Dallas, Texas, 1935  
to present.



Samuel Alfred Blackburn

Born August 8, 1885 in Edwardsville, Illinois.  
Married and has two children.

Industrial Arts faculty since 1917.  
Director of the department since 1935.

Formal Education:

Illinois State Normal University, Normal, Illinois, diploma, 1908.  
Bradley Polytechnic Institute, Peoria, Illinois, diploma, 1911.  
Illinois State Normal University, Normal, Illinois, B. Ed., 1917.  
Austin College, Sherman, Texas, M. A., 1925.  
University of Texas, Austin, Texas, Ph.D., 1930.

Professional Experience:

Rural school, Levanon, Illinois, 1906-07.  
Murphysboro Township High School, Murphysboro, Illinois, 1908-10.  
Spring Valley Associated Schools, Spring Valley, Minnesota,  
1911-14.  
Oak Cliff High School, Dallas, Texas, 1914-16.  
North Texas State College, Denton, Texas, 1917-1955.

Publications:

Problems in Farm Woodwork, Peoria, Illinois, Manual Arts Press.  
Boy Activity Projects, Peoria, Illinois, Manual Arts Press.

Avocational Interests:

Wood carving  
Cabinet making  
Banking  
Traveling

L. Rives Woodson

Born June 14, 1886, in Memphis Tennessee.

Industrial Arts faculty from 1925 to 1927.

Installed the print shop and was instructor and press supervisor for two years when he left the college to enter a private printing business in Denton. Since his death a son has operated the Woodson Printing Company on Highland Street near the Odd Fellows Cemetery.

## J. D. Hall

Born December 24, 1906, in Mt. Pleasant, Texas.  
Married and has one child.

Industrial arts faculty since 1927.  
Supervisor of the College Press.

Formal Education

North Texas State College, Denton, Texas, B. S., 1926.  
University of Missouri, Columbia, Missouri, M. S., 1933.

Professional Experience

Teaching, Cisco High School, Cisco, Texas, 1925-27.  
Teaching and supervising college press, North Texas State  
College, Denton, Texas, 1927 to present.

Avocational Interests

Photography.

## Robert Wayne Adams

Born November 13, 1906, in Greeley, Colorado.  
Married, has no children.

Industrial arts faculty, 1937-47.

Formal Education

Colorado State College of Education, Greeley, Colorado,  
A. B., 1929.  
Colorado State College of Education, Greeley, Colorado,  
A. M., 1937.  
University of Missouri, Columbia, Missouri, Ed. D., 1947.

Professional Experience

Industrial Arts, Cheyenne Junior High School, Cheyenne,  
Wyoming, 1930-33.  
Industrial Arts, Cheyenne Senior High School, Cheyenne,  
Wyoming, 1933-37.  
Industrial Arts, North Texas State College, Denton, Texas,  
1937-47.  
Assistant Director of Instruction Training, Fort Knox,  
Kentucky, Armored Force School, 1943-45.  
Director, Demonstration School, North Texas State College,  
Denton, Texas, 1947-48.

Professor of Industrial Arts, Colorado State College, Greeley,  
Colorado, 1948-49.  
Director of Teacher Education, North Texas State College,  
Denton, Texas, 1949 to present.

#### Publications

Several magazine articles based on doctor's dissertation.

#### M. Ray Karnes

Born July 13, 1912, in Comanche, Texas.  
Industrial Arts faculty, 1939-40.

#### Formal Education

North Texas State College, Denton, Texas, B. S., 1937.  
North Texas State College, Denton, Texas, M. S., 1938.  
University of Missouri, Columbia, Missouri, Ph.D., 1948.

#### Professional Experience

Instructor, North Texas State College, 1938-40.  
Missouri State Department of Education, 1941-42.  
Director of Training, the Armored School, Fort Knox,  
Kentucky, 1942-45.  
Assistant professor of Industrial Education, University of  
Missouri, 1946-48.  
Assistant professor of Industrial Education, University of  
Illinois, 1948-50. Director since 1953.

#### Avocational Interests

Photography  
Archery  
Travel

#### Publications

#### Measuring Educational Achievement.

#### J. Harold Farmer

Born February 12, 1915, Alvord, Texas.  
Married and has two children.

Industrial Arts faculty 1945-49.  
Director of Union Building since November, 1949.

Formal Education

North Texas State College, Denton, Texas, B. S., 1938.  
 North Texas State College, Denton, Texas, M. S., 1939.  
 New York University, New York City, Ed. D., 1951.

Professional Experience

Supervisor North Texas Area, Engineering-Science-Management  
 War Training, University of Texas, stationed at Consolidated  
 Vultee Aircraft, Fort Worth, Texas, 1943-1944.

Instructor of Industrial Arts, White Oak High School, Long-  
 view, Texas, 1944-1945.

Instructor of Industrial Arts, North Texas State College,  
 1945-1949.

Director of Union Building, North Texas State College, Den-  
 ton, Texas, 1949 to present.

Avocational Interests

Coin collecting  
 Gardening  
 Home workshop  
 Fishing

Publications

Co-author of the book, Illustrating for Tomorrow's Produc-  
 tion, MacMillan Company, 1950.

Carlis Coy Davis

Born May 14, 1905, in Tennessee.  
 Married, has no children.

Industrial Arts faculty since 1943.

Formal Education

John Tarleton Agricultural and Mechanical College, Stephen-  
 ville, Texas

East Texas State Teachers College, Commerce, Texas  
 Agricultural and Mechanical College of Texas, College  
 Station, Texas, B. S., 1930.

Agricultural and Mechanical College of Colorado, Fort  
 Collins, Colorado, 1934

Colorado College of Education, Greeley, Colorado, 1936-38  
 North Texas State College, Denton, Texas, M. S., 1943

Professional Experience

Principal, Alexandria public schools, Alexandria, Texas, 1926  
 Superintendent, coach and mathematics teacher, Alexandria  
 public schools, Alexandria, Texas, 1927  
 Industrial arts teacher, Junior High School, Fort Worth,  
 Texas, 1928  
 Teacher, Senior High Woodwork, Central High School, Fort  
 Worth, Texas, 1929-37  
 Senior High General Shop teacher, Arlington Heights, Fort  
 Worth, Texas, 1937-40  
 North Texas State College, instructor, Industrial Arts De-  
 partment, 1940 to present.

Avocational Interests

Travel  
 Shows  
 Photography

## Earle Benjamin Blanton

Born June 25, 1914, in Texas.  
 Married and has one child.

Industrial Arts faculty since 1944, with rank of professor  
 since 1953.

Formal Education

B. S. North Texas State College, Denton, Texas, 1934  
 M. S. North Texas State College, Denton, Texas, 1944  
 Ed. D. A. & M. College of Oklahoma, Stillwater, Oklahoma,  
 1952.

Professional Experience

Classroom teacher, Three P High School, Bailey, Texas, 1934-35  
 Principal, Bethel School, Whitewright, Texas, 1935-38  
 Classroom teacher, Woodrow Wilson Jr. High School, Durant,  
 Oklahoma, 1938-41  
 Classroom teacher, Van High School, Van, Texas, 1941-44  
 Classroom teacher, North Texas State College, Denton, Texas,  
 1944 to present.

Avocational Interests

Gunsmithing and collecting guns  
 Fishing  
 Hunting

### Homer E. Money

Born March 26, 1919, in Gladewater, Texas.  
Married and has two children.

Industrial Arts faculty since 1946, with rank of assistant professor since 1950.

#### Formal Education

North Texas State College, Denton, Texas, B. S., 1942  
North Texas State College, Denton, Texas, M. S., 1947

#### Professional Experience

Austin public schools, Austin, Texas, 1942  
United States Air Force, Technical Training Instructor,  
Sheppard Field, Wichita Falls, Texas, 1942-43  
White Oak High School, White Oak, Texas, 1946  
North Texas State College, Denton, Texas, 1946 to present

#### Avocational Interests

Crafts

### John W. Karnes

Born September 17, 1919, in Yancey, Texas.

Industrial Arts faculty, 1946-48.

#### Formal Education

North Texas State College, Denton, Texas, B. S., 1942  
North Texas State College, Denton, Texas, M. S., 1947  
University of Missouri, Columbia, Missouri, Ed. D.,

#### Professional Experience

Instructor, North Texas State College, 1946-48.  
Professor, University of Connecticut, Storrs, Connecticut,  
1949- to present

### Jerry C. McCain

Born October 27, 1917, in Gainesville, Texas.  
Married and has four children.

Industrial Arts faculty since 1947.

Formal Education

North Texas State College, Denton, Texas, B. S., 1939  
 North Texas State College, Denton, Texas, M. S., 1940.

Professional Experience

Teaching in Paschal High School and North Side High School,  
 Fort Worth, Texas, 1940-47.  
 Teaching Industrial Arts, North Texas State College, Denton,  
 Texas, 1947 to present.

Avocational Interests

Hunting and fishing  
 Gunsmithing  
 Collecting Indian relics  
 Building miniature steam engines.

A. Frank Nelson

Born July 11, 1920, in Moody, Texas.  
 Married and has no children.

Industrial Arts faculty since 1947.

Formal Education

North Texas State College, Denton, Texas, B. S., 1941  
 North Texas State College, Denton, Texas, M. S., 1947  
 University of Missouri, Columbia, Missouri, Ed. D., 1955.

Professional Experience

Instructor, United States Army Air Force (Technical Train-  
 ing), Sheppard Field, Wichita Falls, Texas.  
 Instructor, Amarillo Air Force.  
 Instructor, Chanute Field, Champaign, Illinois.  
 Instructor, North Texas State College, Denton, Texas, 1947-  
 to the present.

Avocational Interests

Woodcarving  
 Hunting  
 Fishing

### Leslie E. Sorrels

Born December 11, 1915, in Ennis, Texas.  
Married and has one child.

Industrial Arts faculty since 1947.

#### Formal Education

North Texas State College, Denton, Texas, B. S., 1940  
North Texas State College, Denton, Texas, M. S., 1948.

#### Professional Experience

Roadway machine operator and brakeman, T. & N. O., Southern Pacific Railroad, 1937-39.  
Industrial Arts teacher, Kingsville Public Schools, Kingsville, Texas, 1940-42.

Industrial Arts teacher, Fort Worth Public Schools, Fort Worth, Texas, 1942.  
War Production Foreman and Job Instructor, Consolidated Vultee Aircrafts, 1942-46.  
Industrial Arts teacher, Fort Worth, Public Schools, Fort Worth, Texas, 1946-47.  
Industrial Arts instructor, North Texas State College, Denton, Texas, 1947 to present.

#### Avocational Interests

Design and crafts of all kinds  
Sports--fishing, hunting, archery.

### Fritz D. Roberson

Born November 6, 1920, in Springtown, Texas.  
Married and has one child.

Industrial Arts faculty since 1948.

#### Formal Education

North Texas State College, Denton, Texas, B. S., 1947.  
North Texas State College, Denton, Texas, M. S., 1950.

#### Professional Experience

Instructor, Copiah Lincoln Junior College, Wesson, Mississippi,  
1948



Avocational Interests

Crafts  
Hunting

## Alvin M. White

Born May 15, 1923, in Utica, Oklahoma.  
Married and has one child.

Industrial Arts faculty 1949-51.

Formal Education

Southeastern State College, Durant, Oklahoma, B. S., 1947.  
North Texas State College, Denton, Texas, M. S., 1949.

Professional Experience

Teaching arithmetic, Hobbs, New Mexico, 1947-48  
Teaching Industrial Arts, North Texas State College, Denton,  
Texas, 1949-51.  
Teaching Industrial Arts, Southeastern State College,  
Durant, Oklahoma, 1953- present.

Avocational Interests

Hunting  
Golf  
Photography

## John D. Rowlett

Born January 10, 1925, in Denton, Texas.  
Married and has one child.

Industrial Arts faculty 1950-51.

Formal Education

North Texas State College, Denton, Texas, B. S., 1949  
North Texas State College, Denton, Texas, M. S., 1950.

Professional Experience

Instructor in Industrial Arts, North Texas State College,  
Denton, Texas, 1950-51.  
Instructor in Industrial Arts, Eastern Kentucky State College,  
Richmond, Kentucky, 1951 to present.

Avocational Interests

Hunting  
 Reading  
 Designing furniture

David W. Duncan

Born September 28, 1921, in Kaufman, Texas.  
 Married.

Industrial Arts faculty since 1950.

Formal Education

North Texas State College, Denton, Texas, B. S., 1946  
 North Texas State College, Denton, Texas, M. S., 1947.

Professional Experience

Teacher, Edinburg, Junior College, Edinburg, Texas, 1947-48.  
 Instructor, San Angelo Junior College, San Angelo, Texas,  
 1948-50.  
 Instructor, North Texas State College, Denton, Texas, 1950  
 to present.

Avocational Interests

Crafts  
 Hunting  
 Fishing

H. H. London

Born in 1900, in Leonard, Texas.  
 Married and has three children.

Industrial Arts faculty 1927-31, while instructors were  
 on leave.

Formal Education

North Texas State College, Denton, Texas, 1924, B. S.  
 University of Missouri, Columbia, Missouri, M. S., 1929.  
 Ohio State University, Ph. D., 1934.

Professional Experience

Industrial Arts, Muskogee, Oklahoma, 1920.  
 Industrial Arts, North Texas Agricultural and Industrial  
 Arts College, Arlington, Texas, 1923-26.

West Texas State College, Canyon, Texas, 1926-27  
North Texas State College, Denton, Texas, 1927-28, 1929-31.  
He is now head of the Industrial Education Department at  
the University of Missouri, Columbia, Missouri.

William Rentz Erwin, Jr.

Born February 2, 1921, in Milford, Texas.  
Married and has two children.

Industrial Arts instructor since 1951 on temporary duty.

Formal Education

North Texas State College, Denton, Texas, B., S., 1948  
North Texas State College, Denton, Texas, M. S., 1949

Professional Experience

Instructor, North Texas State College, 1950 to present.

Avocational Interest

Crafts

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### Books

- Bennett, Charles A., History of Manual and Industrial Education up to 1870, Peoria, Illinois, Manual Arts Press, 1937.
- Good, Carter V., Dictionary of Education, New York, McGraw-Hill Book Company, Inc., 1945.
- Lockwood, George B., The New Harmony Movement, New York, D. Appleton and Company, 1905.

### Bulletins

- Bulletin, North Texas State Normal College, 11 volumes, Denton, North Texas State Normal College, 1912-1922.
- Bulletin, North Texas State Teachers College, 25 volumes, Denton, North Texas State Teachers College, 1923-1949.
- Bulletin, North Texas State College, 7 volumes, Denton, North Texas State College, 1949-1955.
- Bulletin, North Texas State College, Vol. CCV, Denton, North Texas State College, May, 1949.
- Bulletin, North Texas State College, Vol. CCXLVI, Denton, North Texas State College, June, 1953.
- Bulletin, Manual Training Department, Austin City Schools, Austin, 1904.
- Bulletin, U. S. Bureau of Education, No. 1-28, 1923.

### Unpublished Materials

- Blackburn, Samuel A., "The Development of Vocational Education in Texas," unpublished doctor's thesis, Department of Industrial Arts, The University of Texas, Austin, Texas, 1930.
- Shipp, Owen T., Jr., "The Influences of the Manual Labor Movement on Industrial Arts in America," unpublished master's thesis, Department of Industrial Arts,

North Texas State College, Denton, Texas, 1950.

#### Newspapers

Austin Daily Statesman, April 7-8, 1899.

Austin Maroon, Austin High School, May 21, 1929.

The Dallas Morning News, May 1, 1899.

#### Public Documents

General Laws, Austin, Texas, Chapter 113, Sec. 5, 1909.

General Laws, Austin, Texas, Chapter 26, Sec. 3, 1910.

#### Records

Enrollment Record, Industrial Arts Department, North Texas State College, Denton, Texas

Fourteenth Biennial Report of the Superintendent of Public Instruction, Austin, 1902-1904.

Proceedings of Texas State Teachers Association, 1901.

Report of President J. M. Howell, Dallas School Board, 1899.

Records, Office of Registrar, North Texas State College, Denton, Texas.

#### Programs of Commencement Exercises

Programs for North Texas State Teachers College, 1927-1949.

Programs for North Texas State College, 1949-1955.

#### Personal Interviews

C. A. Tripp, July 22, 1954.

S. A. Blackburn, Director of Industrial Arts Department, North Texas State College, Denton, Texas.