### BULLETIN

OF THE

# TEXAS TECHNOLOGICAL COLLEGE

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# **Texas Technological College**

# Its Growth And Its Needs

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#### Contents

- CHAPTER I. Brief History confined to factual presentation of passage of the Act (copy in Appendix), date of opening, etc.
- CHAPTER II. Growth in Enrollment by divisions and classes and majors with full discussion showing the increase in UPPER LEVELS in particular and especially showing the increases in such subjects as Agriculture, Engineering, Home Economics, Business Administration, Education, Science majors, etc.
- CHAPTER III. Location of Students; with map showing where Tech students live in the 185 counties represented here. Proportion from 50 and 100 mile radius from State Board report.
- CHAPTER IV. Vocations of Parents of students from Registrar's Report.
- CHAPTER V. (A) Graduate work at Texas Technological College.
  - (B) Graduates; number per year; majors in which degrees were taken.
- CHAPTER VI. Success of Tech Graduates (a) in advanced work at other colleges and universities and in their employment, with the percentage employed and the percentages in their majors.
- CHAPTER VII. Buildings. The present buildings on the campus, giving with each a general description, date of construction, occupancy, capacity and other details regarding each building.
- CHAPTER VIII. Temporary Buildings, description, when built, occupancy, etc., to include Agricultural Building, Gymnasium, H. E. Annex, Agricultural Annex, R. O. T. C. Building, Shops, Creamery or Milk Room, Agricultural Engineering Shop, etc.
- CHAPTER IX. SELF-HELP. How Texas Tech built her dormitories, paved her campus, built her stadium and athletic field; how we had to save money to build walks and shacks.
- CHAPTER X. (A) THE NEEDS OF TEXAS TECH. Educational Needs.
  - 1. Salary situation
  - 2. Need of more maintenance
  - (B) THE NEEDS OF TEXAS TECH. The Physical Plant Needs.
    - 1. The Library
    - 2. Agricultural Building
    - 3. Home Economics Building
    - 4. Gymnasium-Auditorium
    - 5. Cooperative Cottages
    - 6. Street Lights
    - 7. Military Building

#### Summary

- 1. Texas Technological College is in its eleventh year, the youngest college supported by the State of Texas.
- 2. In these eleven years it has come to have the third largest enrollment in the regular session and the fourth largest total enrollment of any state-supported college in Texas.
- 3. During its opening year it had 1,043 students. At the long session of 1935-36 it had 2,748 students. The enrollment for 1936-37 is not complete, but it will be very close to 3,000 students for the long session.
- 4. Texas Technological College has 370 students taking Agriculture, which exceeds the enrollment in Agriculture in 23 of the Land Grant Colleges of America.
- 5. Texas Tech has 611 students in Engineering, which is more than last year's enrollment at 26 of the Land Grant Colleges and Universities. Many of them have a much larger total enrollment than Texas Tech.
- 6. Texas Technological College has 333 students in Home Economics, which is more than 24 of the Land Grant Colleges of America where they teach Home Economics.
- 7. Texas Tech has more students in Business Administration than 17 of the Land Grant Colleges where Business Administration is taught.
- 8. The cost per student semester credit hour at Texas Technological College is less than a majority of the State-owned institutions each year since 1930-31. The long session cost, and the cost for the summer session and for the whole year at Texas Technological College, make an exceedingly favorable showing in the report of the State Board of Education.
  - 9. The College is asking of the Legislature the following program:
- (a) Restoration of the salary cuts made in the session of 1933 so that our highly-qualified teachers may be retained in the service of the State of Texas. This restoration should be a full restoration to the salary scale in operation prior to the cut made by the session of 1933.
- (b) The College asks for a substantial increase in maintenance. The cost for maintenance for 1935-36 per student semester credit hour was lower at Texas Tech than at any other college in the State except one junior college and two teachers colleges. It was less than half of that at six of the institutions, and has been too low to enable the College to take care of the pressing needs of its instructional program and maintain its physical plant.
  - (c) The College is asking funds with which to erect a Library Building,
- (d) The College is asking funds with which to erect an Agricultural Building.
- (e) The College is asking funds with which to erect a Home Economics Building.
  - (f) Other pressing needs are outlined in this bulletin.
- 10. Graduate work is a necessity in any class-A college of the standing of Texas Tech. The cost of graduate work at Texas Tech is so small as to be almost negligible compared with the benefits the College derives from its operation. The graduate work at Texas Tech is not an interference with graduate work at the University, but can be a great help toward establishing a great graduate school on the level of the doctor's degree at Texas University.
- 11. Texas Technological College has been losing employees due to the very low salary schedule set by the Legislature. Its appropriations have been so meager that no restoration could be given in the upper brackets. In the case of 78 positions on the faculty of Texas Tech, no relief whatever has been possible.

#### Chapter I

#### BRIEF HISTORY

The demand of the people of West Texas for an educational institution of the type and character of Texas Technological College began as early as 1896. It became a campaign issue in 1910, and a bill was introduced in the Legislature in 1911 creating the West Texas Agricultural and Mechanical College. In 1914 the matter was discussed at the Democratic State Convention. An association in favor of such a college was organized in 1915. A bill passed the Legislature in 1917 creating such a college, but confusion arose over its location and the measure was repealed by the Legislature in the same year. In 1921 a second bill was passed but was vetoed by the Governor. In the 1923 Legislature the bill creating Texas Technological College was finally passed and a commission created for its location. The location committee, after mature research, located the college at Lubbock. Work on the buildings was begun in 1923.

The College opened its doors for students October 1, 1925. The initial attendance was over 1,000. (See chapter on enrollment).

#### SCOPE OF THE ACT CREATING TEXAS TECHNOLOGICAL COLLEGE

A copy of the Act creating Texas Technological College is made a part of this bulletin in the appendix. By careful reading of this Act it will be seen that the Legislature intended to create a college of the first class, located in the area north of the twenty-ninth parallel and west of the ninetyeighth meridian, to give instruction in technology, textile engineering, manufacture of cotton, wool, leather and all other raw materials produced in Texas, chemistry of materials, manufacture of raw materials of Texas into finished products; and "also complete courses in the arts and sciences, physical, social, political, pure and applied, such as are taught in colleges of the first class, leading to the degrees of Bachelor of Science, Bachelor of Arts. Bachelor of Literature, Bachelor of Technology, and any and all other degrees given by colleges of the first class." A little later in the first section it says:"... said college being designated to elevate the ideals, enrich the lives and increase the capacity of the people for democratic self-government and particularly to give instruction in technological, manufacturing and agricultural pursuits, and domestic husbandry and home economics."

In Section 2 the government, control and direction of the policies of the college are vested in a board of nine directors to be appointed by the Governor, each holding office for six years, and their terms of office so arranged that three of the directors' offices expire each two years.

In Section 3 the Legislature provides that the college, in addition to technical and textile engineering courses, "shall offer the usual college courses given in standard senior colleges of the first class, and shall be empowered to confer appropriate degrees to be determined by the board of directors." It further specifically authorizes giving of courses in agriculture, and that the board of directors shall furnish assistance to faculty and students in order that they may carry on original research.

The Act is a very broad one, in which it is apparent the Legislature intended to meet the demands of the people of West Texas for a college of equal rank with any of the senior colleges of the State, for the purpose of meeting the needs of the people in the great Western section of Texas, so far removed and so remote from the colleges of the Central and Eastern parts of the State.

#### ORGANIZATION

When the College was opened in 1925, it was organized on the basis of four schools. The School of Liberal Arts contained the Departments of Biology; Business Administration, Economics and Sociology; English, French, Geology, German, Government, History, Latin, Mathematics, Music, Philosophy, Physical Education, Physics; Public Speaking, Spanish and Zoology.

The School of Engineering had the Departments of Architecture, Civil Engineering, Electrical Engineering, Geological Engineering, Mechanical and Chemical Engineering as one department, and Textile Engineering. The School of Agriculture had the Departments of Agronomy, Animal Husbandry and Horticulture. The School of Home Economics had two departments: Foods and Nutrition and Clothing and Design. In 1927-28 the Department of Business Administration, Economics and Sociology was separated into two departments, one Business Administration and the other Economics. The Department of Agricultural Economics was added to the School of Agriculture, and also Agricultural Engineering. The School of Home Economics added the Departments of Home Economics Education and Home Management. The Department of Education and Psychology was also added to the School of Liberal Arts. In 1927 there was added the Department of Military Training. In 1928 the Department of Engineering Drawing was added to Engineering. Architecture was changed to Architectural Engineering, and the Department of Dairy Manufactures was added to Agriculture. In 1929 the Departments of Economics and Business Administration were consolidated into one department.

In 1932-33 the College was reorganized under a new administration. The former divisions of the College, known as schools, were changed to become divisions and were restated in the new order, the first division being the Administrative Division; the second, the Division of Agriculture; the third, the Division of Engineering; the fourth, the Division of Home Economics; the fifth, the Division of Arts and Sciences, formerly called the School of Liberal Arts; the sixth, the Division of Extension; the seventh, the Division of Plant Operation.

Graduate work was begun in 1927-28 with forty students. The first master's degrees were given in 1928. The demand for master's work increased both in regular long session and in summer school. The work was handled for a number of years by a faculty committee and then a separate division was organized by vote of the Board of Directors in 1935.

In obedience to a feeling engendered by the investigations and reports made at the Forty-Third Legislature, considerable consolidation took place In the Division of Agriculture, the Departments of Agronomy, Horticulture and Agricultural Engineering were consolidated into one department known as the Department of Plant Industry, covering the subjects of field crops, soils, horticulture, genetics and agricultural engineering. In the Division of Engineering courses in commercial and allied arts were added to Architecture and curricula leading to degrees in architectural design, architectural engineering and commercial art.

The work in geological and chemical engineering still remained published in the catalogue as part of the Division of Engineering, but the actual work was done in the Departments of Geology and Chemistry in the Division of Arts and Sciences, thus simplifying the organization.

In the Division of Arts and Sciences, the Department of Chemistry was changed to the Department of Chemistry and Chemical Engineering. The previous departments of French, German, Latin and Spanish were consolidated into one department of Foreign Languages. The Department of Geology was renamed the Department of Geology and Geological Engineering. The Department of History was renamed the Department of History and Anthropology. This organization has continued down to the present time.

#### Chapter II

#### THE GROWTH AND DEVELOPMENT OF THE COLLEGE

On the opening of the doors of Texas Technological College, in the fall of 1925, students came in such numbers that the College was upset in its calculations. Not over four or five hundred students were expected. The long session from September, 1925, to the next June gave an enrollment of 1,043 students. Thus the College was "born full grown."

It will be seen from the table which follows that the Engineering features of the College attracted a good deal of attention at first, while Agriculture and Home Economics did not attract so much attention. The enrollment in Arts and Sciences was relatively heavy. The mistake at Tech has always been to classify everything as "Arts and Sciences" or, as originally called, "Liberal Arts," while as a matter of fact the courses in this division are service courses, plus technical courses such as Chemistry, Physics, Geology and Biology majors; Education majors; Economics and Business Administration; pre-medical and pre-law courses; courses of a general nature in languages, literature and social sciences; and other courses leading to a B. A. degree.

In the second year the enrollment increased practically 50%. By the fourth year the College had passed 2,000 in the regular session. In the fifth year (1929-30) Agriculture had passed 200, Engineering had nearly 500, Home Economics had 239, while Arts and Sciences had 1,413, with a grand total of 2.353.

For the next two years the College enrollment fell off, although enrollment in Agriculture continued to increase until 1932-33. At the beginning of 1932-33 the enrollment is presented on a more intelligible basis, classifying separately those taking Business Administration and majors in sciences and Education. From 1932-33 it will be seen that there is a rapid increase in Agriculture, Engineering, Home Economics, Business Administration, and majors in sciences such as Chemistry, Physics, Geology and Biology.

From that time until the present the institution has mainly grown in its technical lines of work. From 1932-33 to 1935-36 the College, as a whole, grew 17.8% in total individual students in the regular long session. At the same time, Agriculture increased 54.1%, Engineering 32.8%, Home Economics 42.6%, Business Administration 44.4%, majors in science 51%, Education 16%, with a distinct falling off in general courses and a total change, as indicated above, of 17.8%. Thus the College began to fulfill its real destiny as both a strong technical college and at the same time one giving a wide opportunity for education in West Texas.

It is fair to count the students in Agriculture, Engineering, Home Economics, Business Administration, sciences and Education as working toward technical or vocational degrees. These lines of work are designed to fit the student definitely for a particular vocation in life. On that basis in 1932-33, 62% of the student body of Texas Technological College were pursuing technical courses while in 1935-36. 74.8%, or nearly 75%, of all students were pursuing technical or vocational courses leading to special fitness in particular lines of work. In this presentation we have been using the long session enrollment of individual students.

#### TABLE I

## ATTENDANCE AT TEXAS TECHNOLOGICAL COLLEGE BY TERMS AND SEMESTERS FROM OPENING OF COLLEGE TO PRESENT DAY

#### **Individual Students**

Year	Fall Term or Semester	Winter Term	Spring Term or Semester	Total Long Session
1925-26	910	897	704	1043
1926-27	1378	1357	*	1535
1927-28	1412	1401	1278	1682
1928-29	1810	1693	1570	2088
1929-30	2051	1917	1730	2353
1930-31	1983	1919	1769	2319
1931-32	1823	1813	1669	2155
1932-33	1950	1939	1758	2332
1933-34**	1943		2067	2361
1934-35***	2433		2184	2684
1935-36	2441		2338	2748
1936-37†	2703		2627	2985

†Complete to February 10, 1937

TABLE II

ENROLLMENT AT TEXAS TECHNOLOGICAL COLLEGE BY DIVISIONS AND MAJORS IN CERTAIN DEPARTMENTS FOR THE LONG SESSIONS SINCE 1925-26

Year	Agri- culture	Engi- neering	Home Eco- nomics	Business Adminis- tration	Sci- ences	Educa- tion	General	Total Arts and Sci.	Total Long Session
1925-26	81	347	78				42 (1)	537	1043
1926-27	107	386	138					904	1535
1927-28	101	349	132					1100	1682
1928-29	150	428	180					1330	2088
1.929-30	205	496	239					1413	2353
1930-31	216	468	239					1396	2319
1931-32	220	378	206					1351	2155
1932-33	205	369	206	324	195	157	876	1552	2332
1933-34	227	419	241	339	269	168	698	1474	2361
1934-35	243	465	277	437	273	237	752	1699	2684
1935-36	316	489	294	468	296	183	702	1649	2748
1936-37†	370	611	333	487	294	156	734	1671	2985

Note: In the fall of 1933 the College changed to two semesters instead of three terms in order to be in conformity with all other institutions in the State. †Complete to February 10, 1937, only.

#### STUDENT LOAD

By student load we mean not the individual students taking work leading to a particular degree or taking work in a particular department, but the total credit hours of students registered for courses of study in a particular department, division or in the whole college.

It must be understood that a course of study leading to a major in a particular subject such as Animal Husbandry or Civil Engineering or Home Economics Education or Business Administration, is not composed entirely of courses taken in such a department but the course of study as a whole

<sup>\*\*</sup>Plan changed from three terms from September to June to two semesters in same period.
\*\*\*New Dormitories available.

may consist, for example, of two years of English, a year of Chemistry, a year of Mathematics, some Speech, Languages, Physics, and other sciences such as Biology in the case of a major in Animal Husbandry, or Economics in the case of Business Administration, plus the particular courses necessary to give the student a good groundwork of training in the fundamental sciences relating to the particular department in which the major is being taken. A glance at any college catalogue will verify this statement, and each course of study leading to each degree differs according to the need of the student.

The number of student hours in a department measures not only the growth from year to year but the load of work which the department must carry out of the money allotted to it. Each department must have adequate teachers, supplies, materials, scientific equipment, library books and other facilities for teaching all the subjects necessary to be offered to the student who is taking his major in that department.

On this basis there has been a remarkable change from 1932 to 1936 at Texas Technological College.

Comparing the student load of the fall of 1932 with that of the fall of 1936 by taking the number of student credit hours of registration in the fall term or semester of each of these two years, we find that, while the total gross number of individual students registered increased 17.8%, the actual student load for the whole institution increased 41.1%.

The increase was 160.1% in the student load of the Division of Agriculture, (see Table IV) with an increase of only 54.1% in the number of students. In Engineering the increase in student load was 70.9%, while the increase in number of students was only 32.8%. In Home Economics the increase in student load was 84.9%, whereas the increase in number of students was only 42.6%. In Arts and Sciences the increase in load was 31%, while the increase in number of students was 18.1%.

This change and growth of the load resulted from the fact that when Texas Technological College changed to a semester system in 1933-34, the number of students actually in attendance in any one term or semester was much more constant and much heavier. For example, the largest number of students in any term or semester prior to 1933-34 was 2,051 in the fall term of 1929-30. When we changed to the semester plan in 1933-34, and with the building of the new dormitories which were opened in the fall of 1934, the enrollment jumped at once to 2,433 in the fall semester of 1934-35, to 2,441 in the fall semester of 1935-36, and to 2,703 in the fall semester of 1936-37.

Under the old term plan the enrollment in the spring term was often less than in fall or winter. For example, in the year when the College had the heaviest fall enrollment under the term plan, namely, 1929-30, with a fall enrollment of 2,051, the enrollment of the spring term was only 1,730. In 1931-32, the spring term enrollment was only 1,669, but on turning to the semester system the enrollment during the second part of the year increased rapidly, thus giving a heavier annual load of student work. The reason for this is that the students stayed by their work through the year better as the school strengthened its courses of study, and especially as it increased its holding capacity and increased its work in the upper level (junior, senior and graduate work). The table which follows shows the growth in student load by departments, both lower level (freshmen and sophomores) and upper level (juniors, seniors and graduates) for the fall of 1932-33, compared with the fall of 1936-37.

It should be noted that some of the results may be due to constructive changes in the courses of study themselves. Requirements in a subject may be made greater in the freshman and sophomore years and lessened in the upper level, or vice versa. These changes would be too numerous and would too greatly lengthen this presentation. Nevertheless, this fact accounts for part of the changes here noted.

TABLE III

LONG SESSION ENROLLMENT, TEXAS TECHNOLOGICAL COLLEGE, BY CLASSES AND YEARS

Year	Freshmen	Sophomores	Total Lower Level	Juniors	Seniors	Graduate Students	Total Upper Level	Total Long Session
1925-26	901	*	901	*	*	25 S. S. S. S.	142	1043
1926-27	951	455	1406	101	28		129	1535
1927-28	879	440	1319	232	91	40	363	1682
1928-29	1003	599	1602	307	149	30	486	2088
1929-30	1224	592	1816	308	199	30	537	2353
1930-31	1281	495	1776	240	241	62	543	2319
1931-32	1111	502	1613	286	199	57	542	2155
1932-33	987	636	1623	324	325	60	709	2332
1933-34	996	709	1705	337	262	57	656	2361
1934-35	1025	741	1766	434	371	113	918	2684
1935-36	982	754	1736	491	435	86	1012	2748
1936-37†	1365	689	2054	494	374	63	931	2985

\*No record available except as to classifications, upper and lower levels. †Complete to February 10, 1937, only.

#### CHANGES IN HOLDING CAPACITY OF THE COLLEGE

When the two reports were made to the Legislature in 1932-33 by the State Board of Education and the Efficiency Committee, one of the chief criticisms of Texas Technological College was to the effect that more than 75% of all the work in the College was in the lower level, or, in other words, that Texas Technological College was largely a junior college. No mention was made of the fact that the college was at that time only six years old.

A table (Table III) is inserted to show individual enrollment by years and classes with totals showing lower level (freshmen and sophomores) and upper level (juniors, seniors and graduate students). Here it will be noted quite clearly that practically all of the growth of the Texas Technological College since 1930-31 has been in the upper level, showing that students are staying at Texas Technological College to finish their work. The holding capacity of the College is greater than ever in its history. The increase in the upper levels is also due in part to an increase of transfers from junior colleges to Texas Tech. It will be noted that the upper level has increased nearly 100% since 1931-32.

In addition to the growth of the College as a whole, as presented in this report, it should be noted that the increase in student load in the upper level for the whole college is 83.5%, while for the lower level it is only 30.7%, and for the whole college 41.1%. The upper level load in Agriculture has increased 134.5%; in Engineering 67.9%; in Home Economics 154.9%; in Arts and Sciences 75.8%. Again this can be seen from the enrollment figures of individual students. The upper level increases have been very marked in Arts and Sciences and in Home Economics. The increased enrollment in Engineering and Agriculture makes relatively large freshman classes this year, and therefore the increase is not as significant in those divisions as in others. It is significant, therefore, that the load in the lower level for the College has increased 30.7%; in the upper level, 83.5%.

The total for the year 1932-33 shows 69.5% of all students registered and classified as freshman and sophomores, while in the fall of 1936-37 only 63.1% of students were registered and classified as freshmen and sophomores. In other words, the upper level registration grew from 30.5% to 36.9% from 1932-33 to 1935-36. While the whole school increased 17.8% from 1932-33 to 1935-36, the number of seniors increased 33.8%; juniors increased 51%; graduate students, 43%; sophomore students, 18.5%; freshmen (which is significant) numbered 987 in 1932-33 and 982 in 1935-36, an actual decrease of a fraction of 1%.

Thus, while the total student body increased 17.8%, the increases among the various classes were: Graduates, 43%; seniors, 33.8%; juniors, 51%; sophomores, 18.5%; freshmen, none. The growth of Texas Tech has been largely in its upper levels as these figures clearly demonstrate. Figures for each division and department could be readily accumulated from the tables published herewith.

The table previously presented in this chapter showing a comparison between student load in the fall of 1932 and the fall of 1936 also shows to a marked degree the changes in upper and lower level work for the whole college.

# TABLE IV COMPARATIVE TABLE SHOWING INCREASE IN LOAD BY DIVISIONS BY COMPARING FALL OF 1932 WITH FALL

DIVISIONS BY COMPARING FALL OF 1932 WITH FALL OF 1936—STUDENT CREDIT HOURS

	1st Te		32-33 Total		mester 1 Upper	936-37 Total	Per Cent Lower	t Gain in Upper	Load Total
Agriculture	640	507	1147	1794	1189	2983	180.5	134.5	160.1
Engineering	901	1106	2007	1574	1857	3431	74.6	67.9	70.9
Home Economics	951	295	1246	1553	752	2305	63.3	154.9	84.9
Arts & Sciences 2		3851	24913	25869	6772	32641	22.8	75.8	31
Total College 2		5759	29313	30790	10570	41360	30.7	83.5	41.1

#### SUMMER SCHOOL

The relation between the summer school at Texas Technological College and its regular long session is quite different from that of a teachers college. In the first place, Texas Technological College resembles the University, A. & M. College and C. I. A. in the fact that the enrollment in its summer school is always less than that of its regular nine months of the long session extending from September to June. In many of the teachers colleges of the State, teachers flock to the institutions in the summer time so that the enrollment in summer school may be 50% or 100% greater than the enrollment in the long session. At Texas Technological College, as is the case at the University, A. & M. College and C. I. A., this is not so. Summer school enrollment is always less than the enrollment in the long session.

Students come to Texas Technological College to summer school for two or three purposes. First, many of the students at Texas Technological College are earning their way through college. They are not able to take the full load of work in the regular session because of the hours required by the jobs which support them while they attend college. These students keep up with their college work by taking summer school work in the same major subject or course which they are pursuing in Agriculture, Engineering, Home Economics or Arts and Sciences, and are able to finish in four years. In addition to these, a certain number of students come in who teach during the winter and work toward their degrees in the summer school. These students may be either teachers expecting to get degrees in Education or they may be students who are expecting to complete their education in some technical subject, and are using their ability as teachers to help them on through college. A considerable number of teachers come to Texas Technological College in the summer either to complete work for a degree or to improve themselves for their chosen field of teaching.

The proportion of young men to young women in the regular session at Texas Tech is generally 60% to 66% men and 31 1-3% to 40% women, while in the summer school there are over 60% women to 30% or 40% men.

In the summer school of 1926 the attendance was 336 individuals. In the summer of 1932 there were 1,606; in the summer of 1934, 1,970; in the summer

of 1936, 1,678. The following table shows the growth in summer school attendance.

#### TABLE V

#### ATTENDANCE AT TEXAS TECHNOLOGICAL COLLEGE SUMMER SCHOOL BY TERMS SINCE THE SUMMER OF 1926 TO THE SUMMER OF 1936, INCLUSIVE

#### **Individual Students**

The state of the s			
Year	1st Term	2nd Term	Total
1926			336
1927			677
1928	858		965
1929	1118	* * * * * * * * * * * * * * * * * * * *	1298
1930	1139		1316
1931	1336		1556
1932	1368	945	1606
1933	1082	738	1288
1934	1596	1096	1970
1935	1549	1114	1956
1936	1470	886	1678
THE RESERVE OF THE PARTY OF THE			

\*Not available

#### OTHER SERVICES

The total number of persons reached annually on the campus of Texas Tech, and through its services, is difficult to portray. The following table shows the long session enrollment, summer school enrollment, extension classes and correspondence courses, and total for the last four years. This does not count the thousands of persons attending meetings sponsored by various divisions of the College, teachers' conferences, agricultural conferences, engineering conferences, Parent-Teacher's meetings, and the great Engineering Show and Interscholastic Meet drawing literally thousands of people to the campus of Texas Technological College.

It is estimated that in a single year the total gross number of persons coming to the college campus would be in the neighborhood of 35,000 to 50,-000 people each year.

TABLE VI
GRAND TOTAL PERSONS REACHED PER YEAR IN
DIRECT INSTITUTIONAL WORK

Year	Long Session Enrollment	Summer School Enrollment	Extension and Correspondence Course Enrollment	Short Course Enrollment	Total Persons Instructed
1932-33	2332	1288	833		4453
1933-34	2361	1970	1236	1777	5567
1934-35	2684	1956	1403	514	6557
1935-36	2748	1678	1522	1426	7374

Note: This does not include meetings.

#### Chapter III

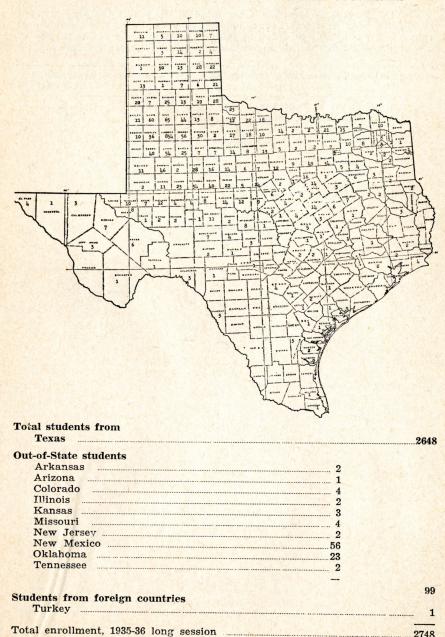
#### LOCATION OF STUDENTS

The distribution of students at Texas Technological College is somewhat different from that of the teachers colleges. In the report of the State Board of Education for 1930-32, it is shown that 95.2% of the students enrolled at Texas Tech are from the State of Texas. During the year 1930-31, 47.6% were from a radius of 50 miles and 58.2% from a radius of 100 miles. In 1932-33, 93.5% of the Texas Tech student body in regular session were from within the State, and in 1933-34, 95.8% were from within the State. In 1933-34, 50.9% of the students came from a radius of 50 miles and 62.1% from a radius of 100 miles. In 1934-35 the State Board's report shows 96.1% of the students in the long session from within the State. It also shows 47.95% of the students in the long session from a radius of 50 miles and 59.61% from a radius of 100 miles. In 1935-36 the number of students from within the State was 96.4%; the number from within a radius of 50 miles was 44.9%; the number from within a radius of 50 miles was 44.9%; the number from within a radius of 50 miles was 44.9%; the number from within a radius of 50 miles was 55.8%.

The students at Texas Technological College in the fall of 1936 came from 185 counties in the State of Texas, with 103 students from other States and one student from a foreign country. The map will show students from every corner of Texas.

#### ATTENDANCE AT TEXAS TECHNOLOGICAL COLLEGE

FOR 1935-36 BY COUNTIES, LONG SESSION ONLY, AND BY STATES OTHER THAN TEXAS AND FOREIGN COUNTRIES



#### Chapter IV

#### VOCATIONS OF PARENTS

For the purpose of bringing to the mind of the reader the proportion of the student body at Texas Technological College from various occupational groups, below is a table prepared by taking the occupations of the parents of each student as listed on his registration card. This shows the following:

Occupation of Parents, Fall Semester 1936	Number	Percentage of Total
Farming or ranching	1086	40
Trades and business	324	24
Professions	276	10
Manufacturing or mechanical indus	stries 247	9
Public service	154	6
Transportation	119	4
Domestic and personal service	59	2.2
Extraction of minerals	60	2.2
Miscellaneous	73	2.6
	2703	

#### Chapter V

#### (A) GRADUATE WORK

Since the second year of its existence, Texas Technological College, in accordance with its fixed policy of meeting the demands of the people of West Texas for a college of the first class with broad scope, has offered work for a fifth year with credit toward a master's degree. The work for a master's degree has been confined to those departments and divisions of the institution where the high training of the faculty, the equipment available and the library facilities were such that the student might receive the quality of instruction and training required of candidates for a master's degree. The courses offered have been of two kinds: (1) courses especially designed and confined strictly to students who had already received a bachelor's degree either at Texas Technological College or at some other institution of equal standing, and (2) courses in the upper level (junior and senior courses) not previously taken by the student as part of his requirements for his bachelor's degree and still fitting in with the major course for his master's degree.

At the present time work is now offered in Agriculture leading to the degree of Master of Science in Agriculture; in Engineering leading to the degree of Master of Science in Engineering subjects; in Home Economics leading to the degree of Master of Science in Home Economics subjects; in Arts and Sciences leading to the degree of Master of Arts or Master of Science in Biology, Botany, Chemistry, Economics and Physics, the degree of Master of Science or Master of Arts in Education, the degree of Master of Arts in History, English, Foreign Languages, Government and Mathematics.

The Texas Technological College has never offered and does not expect to offer work toward the doctor's degree.

The Texas Technological College believes that work on the level of the master's degree is necessary to any first-class institution of the size and importance of Texas Technological College. This standing is recognized in the bill creating the College where the language grants authority to the Board of Directors to "confer appropriate degrees to be determined by the Board of Directors and shall offer four-year courses, two-year courses or short-term courses in farm and ranch husbandry and economics and the chemistry of soils and that adaptation of farm crops to the peculiar soil, climate and condition of that portion of the State in which the college is located, and such other courses and degrees as the Board of Directors may see fit to provide as a means of supplying the educational facilities necessary for this section of the State, and it shall be the duty of the Board of Directors to furnish such assistance to the faculty and students of said college as will enable them to do original research work and to apply the latest and most approved method of manufacturing and, in general, to afford the facilities of the college for the purpose of originating, developing, supporting, and maintaining all of these agencies (physical, mental and moral) for the development of the physical, mental and moral welfare of the students who attend the college and for the further purpose of developing the material resources of the State to their highest point of value and usefulness by teaching the arts of commerce and manufacturing."

Essentially research work is the inspiration around which gathers the interest of faculty and students beyond the bachelor's degree. As a part of every master's degree the student is required to do a certain amount of original work. If in the sciences, this research work consists of the working out of some scientific problem which will add to the knowledge of scientific matters in this section of the State. If in social sciences, the research work consists of surveys and the collection and interpretation of data regarding important questions chosen by the student for his research work and approved by the faculty and the head of the Graduate Division. It may be said already that the research work conducted by candidates for the master's degree at Texas Tech-

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nological College has added materially to the information and the general knowledge and equipment of the institution. It has also stimulated very materially the interest of undergraduate students in scientific fields of study.

The extent of the work at Texas Technological College for the master's degree has not been pushed and is not a very material portion of the total work of the College at the present time. All of the colleges of the State giving four-year courses at the present time, also give work toward the master's degree, including graduate work at six of the important privately endowed or church-supported institutions of the State, all of which have a less number of students than Texas Technological College in the long session.

The number of semester credit hours for the long session 1935-36, taken by graduate students only, was 893 as compared with the total semester credit hours for the long session of 1935-36 of 72,612 semester credit hours. The work in the summer school toward a master's degree has exceeded the work in the long session, because as students have graduated from the College with bachelor's degrees and have gone to teaching, they have come back to summer school to finish their work for their master's degrees and to raise the standard of their accomplishments. In the long session of 1935-36 there were 86 graduate students; in the summer session of 1936 there were 287 students taking graduate work. In the long session the 86 students completed 893 hours. The 287 graduate students in the summer school of 1936 completed 1,497 semester credit hours as against a total of 13,619 semester credit hours completed by all students in the summer school of 1936. The graduate work for the summer school was only 11% of the total, and the special work given for graduate students was only 1.4% of the total summer school load. Hence graduate work at Texas Tech has not thus far grown to be an extensive undertaking. The College is giving great attention to the quality of the work.

There are 40 teachers at Texas Technological College holding the degree of doctor of philosophy and eminently well qualified to give work to candidates for the master's degree. In addition to these the vast majority of all the teachers hold a master's degree, some of them with years of rich experience in their chosen profession and amply able to instruct candidates for the master's degree.

The cost of graduate work at Texas Tech for the long session is exceedingly small when we take the amount of tuition paid by graduate students, the unit cost of the work they pursue, and the fact that graduate students are willing to work part-time for the College, and thus the College is able to employ well-trained graduate assistants who save the College the cost of full-time employees. We have also charged in our account for the cost of that portion of time of every professor devoted to graduate work. The balance shows that the graduate work for the long session cost less than \$4,000. The summer school graduate work, figured on the basis of its relative cost, did not go beyond \$5,000, from which would have to be taken the tuition paid by graduate students.

The graduate work on the level of a master's degree at Texas Technological College is of high quality. Reference is here made to the fact that graduates of this college have gone on to take their doctor's degrees at other institutions and have measured up in all of their work equal to the graduates of very high-class institutions.

Most important of all is the spirit and the inspiration given to the whole College because of its graduate work on the level of the master's degree. No college is worth anything unless it is doing something toward expanding the field of human knowledge. Such expansion requires men and women of inquiring minds, men and women who are willing to devote their time to research. Without such an attitude of mind, without such a high-class, cultural and scientific group of men and women who thirst for knowledge, no institution could do high quality work, even on the level of the bachelor's degree. For these reasons Texas Technological College has developed its graduate work.

#### GRADUATES

Texas Technological College has 2174 graduates with the bachelor's degree, 201 with the master's degree requiring a fifth year of study and research, and one honorary degree, making a grand total of 2376 degrees conferred. Of these degrees 204 have been in Agriculture; 259 in Engineering, 192 in Home Economics; 79 in Chemistry, in addition to those graduates in Chemical Engineering; 34 in Geology, in addition to those graduates in Geological Engineering; 253 in Economics and Business Administration; 32 in Biological Sciences; 342 in Education; 59 in Mathematics; the balance in English, History, Government, Languages, Speech, etc. The number of graduates per year has increased from 275 in 1932-33 to 417 in 1935-36, or an increase of 51.6%. This increase is nexact accord with the increase in upper level students. See table of degrees awarded.

TABLE VII
DEGREES CONFERRED BY YEARS, BOTH LONG SESSION
AND SUMMER SCHOOL

Year	Agri- culture	Engi- neering	Home Economics	B. B. A.	Education		Lang. & Math. (E A. Degree	M. S. & B. M. A.	t Total
1926		4	J X 12					, , ,	
1927					9	3	14		26
1928	11	3	10	6	18	11	43	3	105
1929	12	19	14	8	26	29	68	12	188
1930	16	22	7	17	29	23	59	13	186
1931	24	39	24	22	27	29	82	30	277
1932	29	30	27	28	30	30	63	32	269
1933	25	35	25	18	34	50	61	27	275
1934	19	44	22	27	46	24	88	25	295
1935	32	24	30	25	65	28	102	31	337
1936	36	43	33	49	63	41	104	48	417
Total	204	259	192	200	347	268	684	221	2375

<sup>1</sup> Honorary Degree of LL. D

#### Chapter VI

#### SUCCESS OF TECH GRADUATES

What are the Texas Technological College graduates doing? You must remember that the first class to graduate from the College was in 1928; therefore, the oldest class has only been out of college a little over eight years. They are, therefore, all of them young as compared with the graduates of any other institutions in the State of Texas.

#### AGRICULTURE

Of the 204 graduates in Agriculture, 28 (13.4%) are farming, ranching or engaged in productive agriculture; 21 (10.1%) are engaged as commercial agricultural employees; 77 (37%) are engaged in professional agricultural work, either in research work or in administration of agricultural projects; 7 (3.3%) are college and university teachers or research workers in agriculture; 44 (21.1%) are engaged as high school teachers of vocational agriculture; 7 (3.3%) are advanced students and assistants in colleges and universities still studying agriculture; 24 (11.5%) are engaged in non-agricultural pursuits, 12 as college teachers in subjects other than agriculture, 7 as industrial employees and owners of establishments, 2 as ministers of the Gospel. One graduate is a banker and another has not reported. The only young woman to graduate is married.

Except for this graduate from whom no word has been received, every agricultural graduate is employed, and this has been the case for some years past.

Among the outstanding graduates in Agriculture are the following: The Head Statistician of the Federal Land Bank in Omaha; two employees in the National Cottonseed Crushers Association; one graduate who for five years was with the Office of Cotton Acclimatization of the United States Department of Agriculture; two very prominent ranchers; one who was the first Texas Technological agricultural student to receive the Ph.D degree, which he took at Ohio State Agricultural College; one who received his doctor's degree in Dairy Manufacturing at the Iowa State College, Ames, Iowa, and is now in charge of research and is plant manager of one of the largest cheese factories of the Kraft-Phenix Cheese Company in Wisconsin; and fourteen of the graduates in Agriculture have gone to other institutions and received advanced degrees.

#### HOME ECONOMICS

Of the 192 graduates in Home Economics, 80 are teaching Vocational Home Economics in vocational schools in Texas; 66 are home demonstration agents in Texas; 11 hold important positions as dietitians in hospitals, State institutions, etc.; 10 are engaged as special supervisors either in the Resettlement Administration, the Relief Administration or the United States Indian Bureau; 10 are teaching subjects other than Home Economics; 1 holds a secretarial position. Forty-seven of these young women have done graduate work either at Texas Technological College or at other institutions. They have attended 13 other institutions including the University of Texas, the University of Oklahoma, the University of California, the University of Chicago, the University of Colorado, the University of Nebraska, Cornell University, Texas State College for Women, Iowa State College, Colorado State College, the University of Iowa, Columbia University, and Texas Technological College. Five have taken their master's degrees, three at Columbia, one at Cornell University, and one at the Texas State College for Women.

Counting the ones who are married, all of the graduates in Home Economics are employed.

#### ENGINEERING

Of the graduates in Engineering, 103 are employed directly in Engineering work in the line of their training; 64 are engaged by commercial or industrial concerns such as oil companies, etc.; 6 are engaged in private busi-

ness; 20 are employed in non-engineering work; 15 are engaged in teaching—11 in college teaching and 4 in public schools; 9 are engaged in graduate work along engineering lines.

In a survey made a year ago, every Engineering graduate was employed. In a recent survey a number of graduates have failed to answer. 68.2% of the graduates in Engineering are employed in the State of Texas and 2.8% of them in New Mexico, leaving 29% employed in all the other States. 91.7% are employed in engineering work or in closely allied lines for which their engineering education has fitted them. At the present writing (February, 1937) it is believed that every Engineering graduate is employed with the exception of one whose job recently terminated and who will find another very shortly.

The graduates in Textile Engineering are all employed, the majority of them in direct textile work, some of them being employed in textile mills in Texas and others in the Southeast. Nine of them have reached positions of relative importance from overseers to mill superintendents.

The College is unable at the present time to fill the demand for its graduates in Engineering. A graduate of 1936 who was able to get through because of an N. Y. A. job for two years is now employed by a utility company in Texas, and has recently written to the College, at the request of the head of his company, wanting to select 8 additional graduates from the coming class for the same company.

#### ARTS AND SCIENCES

Of the graduates in Arts and Sciences, our record shows 15 deceased and 19 temporarily unemployed. A little over 10% failed to answer the question-naire sent to them. More than 90% of the 1576 graduates in Arts and Sciences are pursuing lines of work for which they were trained, either in the direct line or very close to their major or in lines of work where their training is of some value to them in the work they are undertaking. Less than 10% are engaged in lines of work in which their training would have only a general cultural value. More than 90% of these graduates have both the cultural value of their college education plus a constant use value.

As to lines of work pursued by these graduates, they are occupying a great variety of positions as teachers in high schools, common schools and colleges, as lawyers, doctors, bankers, merchants, insurance agents, and business men, while others are in scientific and technical work for which they were trained at Texas Tech. A considerable number of them are pursuing work toward higher degrees at other institutions as well as at Texas Technological College. One is Rhodes Scholar from the Southwest at Oxford University, England. They have taken their Ph.D. degrees at such institutions as the University of Texas, the University of California, the University of Virginia, the University of Iowa, and others.

#### Chapter VII

#### BUILDINGS

The Texas Technological College had appropriations for buildings in the first few years of its existence, but has received no appropriation for the construction of any major educational building since the Legislature of 1927. The educational buildings now on the campus are as follows:

The Administration Building, erected in 1924-25, prior to the opening of the College, is a three-story building constructed of brick with stone trimmings, tile roof and attractive towers in the East and West ends; is 60 by 300 feet. In it are located the offices of the President, Business Manager, Registrar, the Information Office, Office of the Dean of Women, Office of the Dean of Men, Office of the Dean of the Division of Arts and Sciences, the College Library, offices of the Departments of English, Foreign Languages, History, Mathematics, Economics and Business Administration, Government, Music, Philosophy, Education and Speech. The Library occupies one-half of the first floor, a space entirely and lamentably inadequate for this purpose. The business offices, including the Registrar's office, Information Office, Financial Office, Postoffice and Office of the Dean of Women, occupy the other half of the first floor. On the second floor are located the offices of the President, Dean of Arts and Sciences, Dean of Men, offices of the Departments of Education, Foreign Languages, English, Mathematics, and ten classrooms. On the third floor are the offices of part of the Department of Education, offices of Departments of Philosophy, Speech, Government, Economics and Business Administration, Music, History and Extension, office of the student annual and alumni office, and seven class-

The Engineering Building, constructed in 1927-28, is a two-story building with basement under one-half; is approximately 275 feet long and 56 feet wide, with two wings running back, one 80 feet and one 48 feet. It contains the Office of the Dean of Engineering, offices of the heads of departments and professors of Civil Engineering, Electrical Engineering, Mechanical Engineering, Architectural Engineering and Allied Arts, Engineering Drawing and Industrial Engineering, the College and student printing plant and office of the student publication; contains also the offices for part of the teachers of English and Mathematics. On the first floor, in addition to offices, there are the laboratories of Civil Engineering, three classrooms, and the laboratories of Mechanical and Electrical Engineering, and the small Engineering Library and Reading Room. The basement under the North wing of the first floor contains parts of the laboratory of Mechanical Engineering, the Tech Press and other laboratory rooms. The second story contains laboratories and drafting rooms for the Department of Architecture and Allied Arts, the office of the Dean, six classrooms, Electrical Engineering laboratories, and the drawing and drafting rooms of the Department of Engineering Drawing. The classrooms in this building are used for classes in other departments of instruction.

The Textile Engineering Building, constructed in 1925, is approximately 65 by 220 feet, two stories in height, built of brick with stone trimmings. In it are contained offices of the Department of Textile Engineering and the laboratories and machine rooms for the teaching of textile engineering. On the first floor are the offices of the department, the testing laboratory, the dyeing laboratory, the carding laboratory, the room occupied by the College Band of 104 pieces, and two classrooms. The second story has the spinning room, the weaving room, the hand-weaving laboratory, the cotton classing laboratory, and five small classrooms. The classrooms in this building are used for classes in other departments of instruction.

The Chemistry Building, provided for in the 40th Legislature in 1927 and completed in 1928, is a three-story building, 60 by 232 feet, two stories and a basement. It has one wing extending back approximately 40 feet.

Originally intended for Chemistry, it is now occupied by the Departments of Chemistry, Physics, Biology and Geology. The basement is occupied by the office of Physics, four laboratories of the Department of Physics, three classrooms and four Chemistry laboratories. On the West or main floor is the Physics lecture room and two additional Physics laboratories, chemical stock room, laboratory of physical chemistry, a laboratory in analytical chemistry, a laboratory in organic chemistry, offices of the Department of Chemistry, a small chemical library room, and a lecture room seating approximately 200 students. The second or top story has the office of the Department of Biology, the office of the Department of Geology, seven laboratories for Biology, a small Geology museum and two Geology laboratories. In the Tower, above the top story, is a small Geology laboratory also in use.

The Home Economics Building, constructed in 1924-25, was the first building finished on the campus. It is approximately 92 by 56 feet, two stories high, constructed of brick and stone with tile roof. In it are the offices, classrooms and laboratories of the Division of Home Economics. On the first floor is the Office of the Dean, four laboratories and one classroom. The second story has one additional teacher's office with five laboratories, a storage room, and a small reading room for Home Economics students. This space is wholly inadequate.

Note: In addition to this building, a small, one-story frame building, called the Home Economics Annex, was constructed in 1934. It contains two additional laboratory rooms.

The Home Economics Practice Home was built in 1927 and opened in 1928. It is a two-story residence building used as a laboratory in Home Management, which is required of all graduates in the Home Economics Division. It contains a living room, dining room, kitchen, hall, bedrooms and other accessories of a regular residence. Students occupy it, six or eight at a time, under the instruction of a member of the faculty, who stays in the Home Management House and supervises their work. Students pay their own board while living in the building.

The Central Heating Plant, built at the beginning of the College, remodeled in 1931, contains the boilers, switchboards and other accessories necessary for supplying steam heat to all buildings, electric power used in all buildings, and handling the College water supply. A system of tunnels contains the necessary steam and other mains to carry the steam heat and other services from the plant to the various buildings on the campus. The East room of the Power Plant is now used temporarily as part of the shops in Mechanical Engineering. In connection with the plant there are three wells and a tank for the complete water supply of the College, including the necessary pumps and water mains extending over the campus.

The Livestock Pavilion, erected in 1925 before the opening of school, was intended for livestock judging purposes. At first it was the only assembly room on the campus. It had an open arena with seats around the side. The building is approximately 65 x 125 feet. As the College has increased in size, and the space for the Division of Agriculture has become more inadequate, over one-half of the Stock Judging Pavilion has been cut up into offices, classrooms and for other purposes, leaving only the West end of the building still in use as a stock pavilion.

The Dairy Barn, finished in 1925, has stanchion room for forty head of cattle, with box stalls, storage room for feed, milk room, silo and other accessories. At the South end of this barn the milk room has gradually been extended by the earnings from the Dairy Manufacturing Department to provide meager facilities for teaching Dairy Manufacturing, including cold storage equipment, churn, separators, and the other machinery necessary for teaching the commercial enterprises of market milk, manufacture of butter, cheese, ice cream, etc.

Farm and Farm Buildings. The property of the institution not used as a campus comprises approximately 1688 acres of excellent farm land, lying

West of the campus. On it is raised the feed for livestock, the crops necessary for illustrative material, and for promotion of research in the work of the College. Recently, by special appropriation, two irrigation wells were put down on the farm, which furnish enough water to irrigate approximately 200 acres of land. These wells have been in use only one year.

The Dormitories. Texas Technological College has never received any appropriation from the Legislature for any dormitories. Its students have had to be housed very largely in private residences around the campus. In 1933 a careful survey was made and the Board of Directors furnished with the information that the facilities of the town had practically been exhausted; that if the College was to grow further, additional housing space for students must be provided. Under the authority of the Board of Directors, application was made to the Public Works Administration for loan and grant with which to erect two dormitories, one for men and one for women. The loan and grant were finally secured, plans drawn and contract let, without any aid from the State except the passage of a law authorizing the College to borrow money from the Federal Government. The ground was broken the first of March, 1934, and the two dormitories completed for the opening of school October 1, 1934. Each of these dormitories is fireproof in construction, contains living room for 320 students, with dining room, kitchen, storage rooms, toilets, bathrooms, etc. Each room has a layatory with hot and cold water, is nicely furnished with roll-a-way beds, study table, dresser, chairs, etc. The amount borrowed on these two dormitories was \$520,000. Approximately \$140,000 was received by grant from the Federal Government. The loan obtained at that time is being paid off by the year at 4% interest, and the College is able to report now that it has paid its bonds when due. Board and room in these dormitories is at the rate of \$24 per student per month for the standard room, with two students to the room.

The Bookstore is a one-story building originally erected as a cafeteria. It contains the College bookstore and lunch counter.

Note: Reference to additional buildings, regarded as temporary buildings only is made in the next chapter.

## Chapter VIII

#### TEMPORARY BUILDINGS

There are a number of buildings on the campus which should properly be designated as temporary buildings only, because of the character of construction and design of the buildings. They were intended largely to meet the emergency needs of the College from time to time, in accordance with its growth, its appropriations, and the money it could find available for these imperative needs. These buildings are as follows:

The Agricultural Building was erected in 1927. It is a one-story, tile and stucco structure, 88 feet long and 50 feet wide. It contains the Office of the Dean and offices of the heads of the Departments of Animal Husbandry, Plant Industry, Dairy Manufacturing and Agricultural Economics. It has one classroom, two laboratories, and one reading room and library for agricultural students. It is so totally inadequate for the use of the fast-growing Division of Agriculture that classes in Agriculture have to be scheduled in other buildings on the campus at a distance from the Division of Agriculture.

During the summer of 1936 this situation became so aggravated that a temporary annex was built. It is constructed of wood, 20 feet wide by 102 feet long, containing six offices and three classrooms.

There has also been constructed a somewhat temporary building for teaching of Agricultural Engineering. It is a sheet iron structure, much of it constructed by student labor. In it are kept equipment used in teaching Agricultural Machinery and other Agricultural Engineering subjects required of all Agricultural majors. The students and faculty have constructed an adobe addition to this building for an office for the teacher of Agricultural Engineering.

An additional structure has just been completed for the teaching of classes in meats, including slaughtering and preparation of meat for marketing. It is a temporary building very cheaply constructed.

Gymnasium-Auditorium. The Gymnasium-Auditorium was constructed in 1927. It is a rough frame structure with walls of hollow tile. There are seats on three sides of an arena or level floor, 83 by 44 feet, used for gymnasium purposes. All of the dressing rooms, toilets, shower baths and offices in Physical Education, both for men and women, and much of the athletic work of the College, are housed underneath these slanting seats on the three sides of this Gymnasium. The building is a hollow shell. It will seat approximately 1,800 persons by putting chairs on the arena floor. The seats on the side are plain wooden planks. The seats are not as comfortable as ordinary stadium seats. Many of the classes in Physical Education have to be conducted on the outside when the weather will permit. The dressing rooms, shower baths and other facilities in the Gymnasium are so totally inadequate as to make the program of the institution in Physical Education extremely difficult. With approximately 1,700 men students and more than 1,000 women students the Physical Education quarters are very inadequate. (See Chapter X on Needs).

Home Economics Annex. Already referred to under Home Economics Building in the last chapter.

Agricultural Annex. Already referred to under Agricultural Building in the last chapter.

Mechanical Engineering Shops, located just East of the Power Plant; a one-story building, 50 by 100 feet, containing pattern shops, wood shops, machine shops, foundry and welding shops, and sheet-metal working shops, using part of the Power Plant itself. This building is temporary in character and is not located as it should be, adjacent to the Engineering Building. It was evidently constructed close to the Power Plant in order that it might ultimately be used as a repair building for the Buildings and Grounds De-

partment when adequate shops could be constructed for the Engineering Division. It is totally inadequate for the needs of the College. It is so small that sections in various lines of shop work are too small, making for uneconomic use of instructional staff and equipment. In spite of its many handicaps, the shop is doing an excellent job of training.

Reference has been made to the Milk Room and Temporary Creamery in discussing the Dairy Barn in the last chapter.

Reference is made to the Agricultural Engineering Shops in the last chapter.

Military Building. During the year 1936 the Texas Technological College received the first Unit of its regular R. O. T. C., a unit in Engineering. The College had no place whatever in which to house this Unit. At a cost of approximately \$4,500, a temporary building was constructed, just north of the Engineering Building. It is 20 feet wide and 160 feet long. It contains a classroom, offices, storage room, etc., for the Engineering Unit of the R. O. T. C.

#### Chapter IX

#### SELF HELP

Texas Technological College has done everything within its power to create an institution and to furnish those facilities necessary for its operation with as little help from the State as possible. As examples of this self-help and as examples of the good faith of the institution toward the State, we submit the following items:

#### PAVING

In 1932-33 there was not a single foot of pavement to any educational building of Texas Technological College. The only bit of pavement ever put onto the campus was a narrow strip leading from College Avenue into the President's Home, located at a considerable distance from the educational buildings. The Legislature of the State of Texas has never made a single appropriation for paving on the campus.

In the fall of 1933 application was made to the Civil Works Administration for a project to pave the central streets of the campus. In 1934 this pavement was finished, entering the campus at its main entrance on Broadway up to the central circle, around the circle, and then a new outlet by way of a loop, South of the new Women's Dormitory to College Avenue opposite Fourteenth Street. This pavement was finished in 1934. The Civil Works Administration furnished the labor. The College furnished the material, and the bituminous top on the pavement after the curb and gutter had been laid and the caliche base installed, without any appropriation from the Legislature. Not a single penny was appropriated by the Legislature for this work. The cost of this paving to the College was \$15,939.47. Special appropriations were made during this period to other colleges to enable them to accept grants from the government for paving. Tech did it alone.

In 1935 a second project under the provisions of the Act creating the Works Progress Administration was entered into and is now progressing, completing the curb and gutter and caliche base on a loop past the Engineering Building to the Textile Building, and thence out to College Avenue by way of the Gymnasium and Athletic Grounds, a loop from the central circle to the agricultural group of buildings, and caliche base on one street running South from the Administration building to Nineteenth Street, a distance of 1,900 feet. By economy and good management Texas Technological College has been able to save the money put into these paving projects to supplement the very fine cooperation of the Federal Government in making available some of the relief work for work on the Texas Technological College campus.

#### DORMITORIES

It is not difficult to find appropriations for dormitories to quite a number of the State-supported colleges in Texas. Texas Technological College is not complaining but is only stating it as a fact that no appropriation has ever been made to Texas Technological College to aid in any way in the erection of new dormitories or any accommodation for the housing of students on the campus of the institution. Appropriations have been made for this purpose to other colleges in the State.

In the fall of 1933, under the direction of the Board of Directors of Texas Technological College, an application was made to the Public Works Administration for funds with which to erect two dormitories, one for men and one for women. A loan and grant of \$675,000—\$520,000 of which was a loan—was asked of the Federal Government. Incidentally, the Legislature of the State passed an Act authorizing State Colleges to make such requests and to borrow money of the Federal Government for such purposes. The application was finally considered and granted and building operations begun March 6, 1934. On October 1, 1934, the two dormitories were ready to be

occupied by the students. Each is three stories in height, with rooms for 320 students each and with necessary kitchens, storerooms, cold storage rooms, dining rooms, lounges or social rooms, offices, etc. The buildings are entirely fireproof, of attractive design, and well furnished. Each room has individual closets with roll-a-way beds, study desk, chairs, dresser, hot and cold water within the room, and with ample facilities for toilet and bath in each wing on each floor. These dormitories have become social centers of life upon the campus.

By reference to the enrollment figures it will be seen that the number of students in attendance at Texas Technological College jumped from 1,943 in the fall of 1933 to 2,433 in the fall of 1934, the date of the completion of the dormitories, or an increase of 490 students.

The College is again in the position where all of its facilities for students are occupied. If we could obtain from any source whatever enough money to build additional dormitories, the enrollment in the College would increase accordingly.

The debt on these dormitories is being paid off by the operation of the dormitories themselves. They are being operated on an economic basis, with a charge for board and room of \$24 per student per room per month, and yet the loan is being repaid promptly. If it were not for the repayment of the loan, this College knows that even at this low rate of board and room we could have a considerable income from the dormitories, which could be used for other purposes as is the case at colleges to whom the Legislature has given dormitories.

#### ADDITIONAL TEMPORARY BUILDINGS

Since the original appropriations incident to the founding and building of the College, Texas Technological College has not received a single cent for any additional educational buildings on the campus, and yet the following temporary, makeshift buildings have had to be erected without any aid from the Legislature and without any appropriation for any such purpose:

The Agricultural Engineering Laboratory or shed at a cost of \$1,451.68. The Home Economics Annex at a cost of \$2,947.94.

The Agricultural Annex of three classrooms and six offices, at a cost of \$3,406.01.

The Military Building for the R. O. T. C. Engineering Unit at a cost of \$4,600.22.

A Meats Laboratory for the Animal Husbandry Department at a cost of \$3,500.00.

In addition to these all of the equipment for the Department of Dairy Manufacturing was purchased, and the building and cold storage plant, in which students are taught their courses in dairy manufacturing, were constructed out of the earnings of the department by operation of a regular creamery manufacturing plant for instructional purposes.

The Athletic Department has constructed a stadium seating nearly 15,000 people. It has a beautiful football field. The same was finished with proper dressing rooms for the home and visiting teams, and was taken care of without any cost whatever to the State.

The above are but a few items of self-help of the Texas Technological College.

#### Chapter X

#### THE NEEDS OF TEXAS TECHNOLOGICAL COLLEGE

#### (A.) EDUCATIONAL NEEDS:

No adequate college of the first rank can be maintained without a well trained faculty who love their vocation as teachers, who are willing to put every ounce of their physical and mental energy into the task of helping young men and young women get an education; an adequate library staff and library as the central place where the record of the past and the accomplishments of the present are kept in printed form; adequate laboratories, shops, supplies, equipment, scientific instruments, etc.

The Board of Directors and the Administration of Texas Technological College are fully aware of the necessity of administering such an institution with the utmost economy and efficiency consistent with efficient educational work. It is the belief of the administrative officers of the institution that the College has been administered in this spirit. The report of the State Board of Education, from time to time, shows the following facts:

In 1930-31 the State Board of Education made a report regarding the cost per "full-time student" for the long session of 1930-31. For Texas Technological College this cost was lower than eight of the fifteen State-supported colleges surveyed by the State Board of Education.

In 1933-34 the report of the State Board of Education was made in terms of the "cost per student semester credit hour". The cost at Texas Tech for the long session 1933-34 was \$6.77 per student semester credit hour, as shown on page 198, Report of the State Board of Education for 1932-34. This cost was the lowest in the State of Texas except that of one teachers college where the cost was exactly the same, one teachers college where the cost was \$0.37 less, and one junior college. A number of the other State-supported institutions had costs running from \$0.75 to more than \$2.00 per semester credit hour greater than Texas Tech for the year 1933-34. The cost for the entire year 1933-34, including summer school, was \$6.11. There were four teachers colleges where the cost was slightly less on account of their very large summer schools. The cost at Texas Tech for the entire year 1933-34 was less than any other college except these four teachers colleges and a junior college. At some state institutions the cost was nearly \$3.00 per semester credit hour greater than at Texas Tech.

The cost at Texas Technological College for the 1934-35 long session was \$5.92 per semester credit hour. Only one State-suported institution, and that a junior college, had a less cost than this figure. The cost at Texas Tech for the entire year 1934-35 was \$5.57. Again there were three teachers colleges where the cost was slightly less for the year on account of their large summer schools; and, outside of that, only one junior college had a less cost than Texas Tech.

For the year 1935-36 the State Board of Education Report shows the cost at Texas Technological College to have been \$6.76 for the long session. There were four colleges in the State with a less cost than this for the long session and ten State-supported colleges with a greater cost. The cost for the entire year, including the summer school, at Texas Tech was \$6.48. There were three teachers colleges with large summer schools where the cost was less than this. Otherwise, only a junior college had a less cost. All other State-supported colleges had a greater cost per student semester credit hour than Texas Tech.

The colleges contained in the State Board of Education report are: A. & M. College, John Tarleton Agricultural College, North Texas Agricultural College, Texas State College for Women, Texas College of Arts and Industries, College of Mines, University of Texas, Texas Technological College, East Texas State Teachers College, North Texas State Teachers College, Sam Houston State Teachers College, Southwest Texas State Teachers College,

Stephen F. Austin State Teachers College, Sul Ross State Teachers College, and West Texas State Teachers College.

Texas Technological College has a faculty of 140 members doing teaching work on a full-time basis for the year 1936-37. In 1932-33 the College had 107 and a fraction, due to some teachers teaching only part-time, for which they were paid on part-time basis.

The general salary schedule at Texas Technological College prior to 1932 was \$3,750 for heads of departments; from \$3,000 to \$3,600 for full professors not heads of departments; from \$2,500 to \$3,200 for associate professors; from \$2,100 to \$2,500 for assistant professors; and from \$1,800 to \$2,100 for instructors. The Legislature cut this schedule down with every single individual cut at least 25% and some as high as 33 1-3%. The schedule established by the Legislature of 1933 was \$2,700 for heads of departments; \$2,200 to \$2,500 for full professors; \$1,500 to \$2,100 for assistant professors; and \$1,350 for instructors. The Legislature of 1935 took pity on the very low salaries of instructors and raised all of them at Texas Tech for whom statutory appropriations had been made from \$1,350 to \$1,500. Likewise, the Legislature evened up one or two other salaries where heads of departments had been cut to \$2,200 or \$2,000. There are, however, 78 positions at Texas Technological College for which no changes were provided by the Legislature, and as to whom the total income by way of appropriations or student fees was inadequate for the Board of Directors to make any restoration of salaries whatever. These 78 positions are now at the bottom of the depressed salary period, while everybody else in industry, in agriculture, in trade, in manufacturing, and even school-teachers have had much of their salaries restored.

Meantime some heads of departments in one State institution are receiving higher salaries than they did before the depression. Meantime every employee at one State institution received a promotion, and some of them quite material promotions, at the hands of the Legislature in 1935. The Administration of Texas Tech played square with the Legislature, and yet there are positions at some institutions that never were cut 25%; there are positions where the salaries remained constant throughout the entire depression. The Board of Directors and the Administration of Texas Technological College are asking deep consideration of the necessity of restoring the salary scale of its faculty.

#### COST OF LIVING

Meantime, since 1932-33, the cost of living has gone up as everybody knows. The Bureau of Labor Statistics show that the average retail price of cereals has advanced 24% since September, 1932; meats have advanced 28.5%; dairy products 28.7%; eggs 57%; fresh fruits 37%; fats and oils 48%; sugars and sweets 11.6%.

In Lubbock butter has gone up from 25c in September, 1932, to 37c a pound in 1936; cottage cheese from 20c a pound to 30c a pound; American cheese from 20c a pound to 38c a pound; milk from 8 c a quart to 12c a quart; eggs from 19c a dozen to 32c a dozen; roast pork from 15c a pound to 23c a pound; steak from 20c a pound to 32c a pound; Irish potatoes from 2c a pound to 4c a pound; sweet potatoes from 3.5c a pound to 4.5c a pound; raisins from 8c a pound to 10c a pound; flour from 3.9c a pound to 4.1c a pound; whole wheat flour from 6.5c a pound to 10c a pound; bread from 7c a loaf to 9c a loaf; sugar from 5c a pound to 6.5c a pound; vegetable shortening from 19c a pound to 25c a pound; house rents from 25% to 50% Clothing and every other article purchased by those who live and support their families have gone up from 25% to as high as 50%. Rentals have increased materially, in many cases as much as 50%.

At this time we are positive that many of the faculty at Texas Technological College are having an exceedingly difficult time. Quite a number have had to withdraw money from their previous savings accounts to use

to pay the family living and educate their children. It is our contention that they have a right to a living wage comparable to other employees in a similar profession under similar circumstances.

Meantime the College has already suffered serious losses from resignations as outlined in the next chapter.

#### TEXAS TECH'S HEAVY LOSSES DUE TO LOW SALARY SCALE

The task of maintaining a highly qualified teaching staff in all divisions of Texas Technological College has indeed been a serious one during the last four years. In these four years the level of salaries for the positions of deans, heads of departments, professors, associate professors, assistant professors, and staff officers in the higher brackets have been from 25% to 33-1/3% below the standard of these salaries prior to September 1, 1933 As explanned elsewhere, there has been no money from any appropriation or local income with which to restore any part of these higher salaries.

No institution of the character and standing of Texas Technological College can be maintained without a faculty composed of persons of high quality training and experience. In the faculty at Texas Technological College are 40 men and women who have earned their doctor of philosophy or doctor of science degrees at the leading institutions of America, 68 who have earned their master's degrees under similar circumstances, 2 who have their professional degrees, 27 who have bachelor's degrees. We have also 3 teachers who, without degrees, have wonderfully fine practical experience behind them, fitting them for the particular position they hold.

#### LOYALTY

The loyalty of the staff of Texas Tech has been amazing. They like the College; they are reluctant to leave because the social and other conditions surrounding the College are attractive. Many of them have remained in the face of offers of higher salaries because of their devotion to their work and their loyalty to the institution.

The effect of the low salary scale is best indicated by the following facts:

Eight members of the staff in Agriculture out of 16 have resigned in the last four years to accept higher salaries. When these eight men left Texas Technological College their average salary was \$2,031. The average salary they accepted was \$3,200. The eight members of the staff who remained here are receiving an average salary of \$2,260. This is only equal to the average salary of their own graduates in the class of 1929. These graduates have an experience of seven years while the eight faculty members have an experience of twelve years and much higher training because of advanced degrees. Fourteen men who have graduated from the Texas Technological College Division of Agriculture and who have gone on to take advanced degrees, are now receiving an average salary of \$2,410. The men who taught them at Texas Tech have received \$2,147. The question we have to answer is: Can a well-selected, dependable, highly-skilled staff of teachers in a special field be held together when in a very short time 50% of them leave for an average salary increase of 57%. New and untried graduates of the College are receiving as high as \$2,000 as compared with \$1,500 for the ninemonths long session on the part of instructors in college.

From the Engineering Division we have lost three employees, all at considerable advance in salary. Unless the College is able to do something toward restoration of salaries for the next biennial period, we will lose additional members of the staff of Engineering.

One professor in the Division of Home Economics resigned to accept a position at Purdue University at an increase in salary of \$500. She would have remained with us could we have met this increase. Another of the very finest teachers in Home Economics has repeatedly been offered an increase in salary to go to other institutions, but has remained here because of her attachment to this college and her hope that salaries here will be restored.

In Arts and Sciences the Head of the Department of Chemistry resigned here before the salary cut. His salary here was \$3,750. He accepted a position at Rutgers University in New Jersey at \$7,500.

An instructor in English with a Ph.D. degree from Princeton resigned here where he was drawing a salary fixed by the Legislature of \$1,350 to accept a position at Ohio State University at \$2,000.

Another instructor in English with a Doctor's degree from Yale who held a position here at \$1,350 resigned to accept a position at the Rhode Island State College, where he is drawing a salary, at the present time, of \$2,800.

The professor who, from the opening of Texas Technological College, had been Head of the Department of Spanish and afterwards the consolidated Department of Foreign Languages, resigned last year to accept the position of Head of the Department of Foreign Languages at the University of Kansas, with almost exactly a 50% increase in his annual salary. His salary here had been cut in 1933 from \$3,750 to \$2,700 by act of the Legislature.

Two members of the Department of Geology resigned some time ago to accept positions, one at Ohio State University and the other at Louisiana State University, at higher salaries than paid at Tech.

Even before the cut one instructor left Tech to complete requirements for a doctor's degree and was offered a \$500 advance in salary at Princeton University.

An instructor in the Department of Mathematics at \$1,350 resigned to accept a position at New Mexico A. & M. College where he is receiving \$2,500.

Eight men employed in the Department of Mathematics, ranking from instructor to full professor, have resigned in the last eight years to accept positions at higher salaries at other institutions.

The Board of Directors of the College and its Administration have spent much time and thought on this very important subject. Any careful comparison of the salary schedules at other State institutions in Texas With Texas Tech will show the difficulty of our situation, when the importance of the institution, the nature and scope of the work being done, and the standing of the institution in the educational world, are considered. Please note that in order to make the money go around and keep our staff at the salaries they are now drawing, the burden of work of every employee of the College has been increased. Such rating agencies as the Southern Association in the letter later published in this bulletin call our attention to the heavy load of work carried by our teachers.

All of this results from the fact that since 1927-28 the appropriations made by the Legislature for operating expenses of the College have been cut 29% while the enrollment of the College has increased 75%.

In the last four years, 1932-33 to 1936-37, the appropriations made by the Legislature have been cut 19.4% or from \$428,300 to \$352,207, excluding appropriations made for summer school. In the same period the enrollment for the long session, which was 2332 for the long session of 1932-33, has grown to 2,960 for the long session of 1936-37 up to February 5, an increase of 26.7% in actual students enrolled.

As shown previously in this bulletin, the load of work done is much greater than these figures show because there is a more constant attendance and heavier work carried by the students. For 1932-33 the record shows 1950 students in the fall term, 1939 in the winter term and 1758 in the spring term, an average attendance of 1879 and a total enrollment of individual students for that long session of 2332. For the year 1936-37 the first semester shows 2703 students enrolled, and the second semester up to February 10, an enrollment of 2627, an increase in actual average attendance during the long session of 40%. A cut of 19.4% in appropriations accompanied by a 40% increase in load shows the difficulty Texas Technological College is

having in holding its teachers, increasing the number of teachers and yet staying within its income.

The inadequacy of our support is best indicated when we attempt to place the matter upon a definite standard. The following table shows the Texas Technological College measured by the standards of the Southern Association of Colleges and Secondary Schools. Their standard is that the cost per student for strictly educational work should be at least \$150 per student for the long session. This is taken by adding the salaries paid for academic instruction (omitting administrative salaries), by adding the money spent for library salaries, books and periodicals, and other support of the library, and then adding the laboratory and classroom supplies; this amount to be divided by the number of students. This table shows that Texas Technological College, in 1932-33, spent \$153.03, which is only slightly more than the standard, but it shows that for each of the three years since then Texas Tech has been below the standard. According to Southern Association standards there should also be spent at least \$3 per student for books and periodicals. Two of the years Texas Tech has been able to exceed the standard. On account of the growing number of students we have fallen considerably below the standard of the Southern Association.

We are publishing herewith the letter received from the Southern Association of Colleges and Secondary Schools.

SOUTHERN ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS
Office of the Executive Secretary
924 Seventh Street, West
Birmingham, Alabama
January 8, 1937

Executive Secretary
M. C. Huntley

President Bradford Knapp Texas Technological College Lubbock, Texas

Dear President Knapp:

At the direction of the Commission on Institutions of Higher Education, I give below the statement of the Commission concerning your 1936 report to the Association:

"The Commission would call attention to the fact that your faculty seems overloaded with work, and the proportion of teachers to students is not up to the average which we expect. We note that your top salaries are only \$2,700. For an institution of your sort, we feel that this is very low indeed. If it is possible for your institution to obtain better state support or larger student fees, such arrangements should by all means be made."

With every good wish for the New Year, I am

Sincerely yours, (Signed)
M. C. Huntley

#### TABLE VIII

#### TEXAS TECHNOLOGICAL COLLEGE MEASURED BY THE STANDARDS OF SOUTHERN ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS

NOTE: The standards of the Southern Association of Colleges and Secondary Schools provide that there shall be "an educational expenditure per student of \$150\$, determined on this basis—Add together the salaries paid for academic instruction (omitting all administrative salaries), plus the money spent for library salaries and for books and periodicals, plus the money spent for library and classroom supplies (not furniture or permanent equipment); and divide the total sum thus secured by the number of students. Audit figures should agree with those used for this purpose."

The standards also provide for the spending of at least \$3 per student for books and periodicals.

(1)	(2)	(3)	*Depart- mental Mainten-	(5)	(6) Number of Students Reg. Lon		Spent for Books &	(9) Amt. Spent rper Stud. t for books and Per-
Year	Salaries	Library	ance	Total	Session	(6)	cals	iodicals
1932-33	302,264.16	17,658.90	36,951.61	356,874.67	2332	153.03	7,264.62	3.20
1933-34	231,525.73	23,194.27	38,808.98	293,528.98	2361	124.32	12,988.34	5.50
1934-35	247,086.79	16,251.91	53,620.73	316,959.43	2684	118.09	5,604.56	2.08
1935-36	265, 139.23	18,320.96	54,236,13	337,696,32	2748	123.25	6,891.04	2.50

<sup>\*</sup>Equipment omitted.

#### ANOTHER COMPARISON

From a bulletin of the Office of Education, United States Department of the Interior, regarding the Land Grant Colleges and Universities, we have taken the sums spent by these colleges for resident instruction and divided these sums by the enrollment of students at each of the colleges. This table is submitted herewith. It shows only one college of the Land Grant Colleges in the United States with lower cost per student than Texas Technological College. In many instances it will be noticed that the cost per student for instruction, not including library, given on this basis for 1935-36, in many of these institutions is more than twice what it is at Texas Technological College. We have simply taken the enrollment and the sum reported by the colleges as spent for resident instruction and divided the number of students into the cost for resident instruction and obtained the result. In this connection we want to call your attention to the chapter in this bulletin on the subject of the quality of our graduates and what they are doing.

This table shows cost of resident instruction per student, for the long session, to have been less at Texas Technological College than at any other college in the table except Utah State Agricultural College.

# TABLE SHOWING EXPENDITURE FOR "RESIDENT INSTRUCTION" AT LAND GRANT COLLEGES AND UNIVERSITIES AND AT TEXAS TECHNOLOGICAL COLLEGE FOR THE LONG SESSION 1935-36 AND COST PER STUDENT

Institution	Enrollment	Spent for Resident Instruction	Resident
TEXAS TECHNOLOGICAL COLLEGE	2,748	\$378,221	\$137.63
Alabama Polytechnic Institute	2,278	394,694	
Arizona University	2.519	537,262	
Arkansas University	1.889	305,983	The state of the s
California University	19.378	5,077,687	
Colorado Agricultural College	1.789	399,477	
Connecticut Agricultural College	818	384,152	CONTROL OF THE PERSON OF THE P
Florida University	2.858	744,022	STATE OF THE PARTY
Georgia University	2.851	466,782	COLUMN TO STREET THE PARTY OF THE
Idaho University	2.503	523,684	
Illinois University	11.175	3,448,600	Married Married Visited Street
Purdue University (Indiana)	4.545	1,373,885	
Iowa State College	5 365	1,538.060	AND A POST OF THE PROPERTY OF
Kansas State Agricultural College	3.453	965,423	The production of the party of
Kentucky University	3 269	971,834	COLD DATE OF THE PARTY OF THE P
Louisiana State University	5 546	1,295,199	
Maine University	1 384	540,670	A P. ACTOR STREET
Maryland University	3 266	1,312,174	
Massachusetts Agricultural College	1.080	466,203	50 (1.10) 40 (1.86) (1.16) 47 (4.16) 47 (4.16) 47 (4.16)
Massachusetts Institute of Technology	2 018	1,766,352	STATE OF THE STATE
Michigan State College	4.051	1,155,652	
Minnesota University	14 522	3,524,570	285.27
Mississippi Agricultural College	1 538	255,777	242.70
Missouri University	4 206	1,500,909	166.30 356.84
Montana State College	1 203	215,408	THE REPORT OF THE PARTY OF THE
Nebraska University	6 152	1,580,909	170.74
Nevada University	004	208,705	256.97
New Hampshire University	1 574	492,146	209.96
Rutgers University (New Jersey)	2557	2.212.371	312.63
New Mexico College of Agriculture		2,212,311	474.13
and Mechanic Arts	567	173,669	308.05
Cornell University (New York)	5,203	4,762,215	915.28
North Carolina State College	1,970	520,239	264.07
North Dakota State College	1,514	238,624	151.00
Ohio State University	11,188	3,131,121	279.86
Oklahoma Agricultural and Mechanical College	3,953	650,881	164.67
Oregon State College	3,301	732,834	221.93
Pennsylvania State College	5 264	1,865,401	354.36
Rhode Island State College	1,137	242,634	213.39
Clemson College (South Carolina)	1 516	253,522	167.23
South Dakota State College	936	309,132	330.26
Tennessee University	3 929	808,392	205.75
Texas Agricultural & Mechanical College	3 542	746,516	210.76
Utah State Agricultural College	2.550	313,794	123.05
Vermont University	1 994	A PARTY OF	
Virginia Polytechnic Institute	1 712	643,108	375.42
Washington State College	3 631	694,234	191.19
West Virginia University Wyoming University	2.557	712,287	278.56
Marromain of The incommit	1 010	298,322	184.94

NOTE: Data taken for colleges, except Tech, from pages 16 and 17 of Circular No. 168, Office of Education, United States Department of Interior. The reason "Resident Instruction" (Column 3 in the table) is chosen is to avoid the possibility of administrative and other costs including the burden of research and the very large extension work of the Land Grant Colleges. Data for Texas Technological College is taken from certified auditor's report for 1935-36.

#### Section B

## THE NEEDS OF TECHNOLOGICAL COLLEGE IN THE PHYSICAL PLANT

It is our purpose in this chapter to cover the pressing needs of Texas Technological College for buildings and improvements. In all of this presentation it must be remembered that the growth of the College is 38.6%, as shown in Chapter 2, in actual students in attendance in a single term since 1932-33. The load of student hours has increased 41.1% in the same period. Not a single educational building has been put up on the campus to add more classrooms, laboratories or other space since the first and original buildings provided by the Legislature up to and including 1927. All buildings added for educational purposes since then have been temporary, makeshift structures.

#### LIBRARY

The greatest need of Texas Technological College is a Library building In the session of 1927 an appropriation was made by the Legislature for a library for Texas Technological College. For some reason, not now apparent the Governor vetoed this appropriation. Repeatedly, from that day to the present, the Board of Directors and the administration of the College have called to the Legislature's attention the most serious need of library space at Texas Technological College. We assert here without fear of contradiction that the Texas Technological College has the most inadequate library space of any State-supported institution in the State of Texas.

The present library is housed on the first floor of the West wing of the Administration Building, a space not intended or built for that purpose. The space occupied there is approximately 5,362 square feet for the stack room, office of the librarian, receiving room, work room and the reading room. The reading room space alone occupies only 2,378 square feet of space. It contains room for only 25 tables with 147 chairs or enough to hold 5.4% of the students attending in the fall of 1936. Only one out of twenty students can find a place in the library at one time.

A teachers college in this State has a library built from appropriations for that purpose with a reading room 168 feet long. That teachers college has an enrollment in the long session less than one-half of the enrollment of Texas Technological College. Their reading room contains upward of 6,700 square feet of space for 1,200 students in the long session. We have 2,378 square feet, or about one-third, for more than twice as many students. It has less books in its library than Texas Tech.

Taking the number of books, pamphlets and other material usually scheduled in libraries from catalogue statements of various State institutions in Texas, Texas Technological College has at least the fifth largest library in a State-supported institution in Texas. We have been only eleven years in accumulating this library. The other libraries, particularly those exceeding ours in numbers of books and pamphlets, have been in existence more than twice the length of time of Texas Technological College. All of these other institutions having larger libraries than Texas Technological College have received appropriations or the benefit of constitutional provisions for large land grants, enabling them to construct handsome, attractive and useful library buildings for their students. But Texas Technological College, young and vigorous and growing, with nearly 3,000 students, has no library facilities worthy of the name.

The space occupied by the library of Texas Technological College is sorely needed for other purposes. Such a new library building would furnish the College not only with library facilities but could be soon constructed as to contribute very greatly to the educational facilities of the institution.

There is plenty of authority for the statement that a library building should be planned to accommodate at least 50% of the student enrollment

in college at any one time in the total seating capacity of its reading rooms and auxiliary rooms used for student purposes. The Texas Technological College library space contains 147 chairs in its reading room and 25 tables supposed to seat six students at the table, two on each side and one at each end. As a matter of fact, the tables are so crowded that it is only possible to put 147 chairs in the reading room. Thus it appears that the seating capacity of the reading room of the Texas Technological College is only 5.4% of its present student body actually in attendance. Instead of accommodating 147 students, the seating capacity of the library ought to be 1,300 students, or almost ten times its present capacity.

We have asked the Legislature for an appropriation of \$300,000 with which to erect a library. The library as planned would have ample reading rooms, seminar rooms and stack rooms to accommodate a college of the size and importance of Texas Technological College. And, at the same time, the building can be so planned that part of it can be utilized for classrooms temporarily while the institution is growing.

The number of catalogued volumes contained in the library of the Texas Technological College as of February 1, 1937, was 53,698. The number of uncatalogued Government documents, pamphlets, maps, etc., is estimated as approximately 20,000. These figures include that portion of the library temporarily loaned to Agriculture, Engineering, Home Economics and Chemistry for use because of lack of space in the reading room of the main library.

The Board of Directors of Texas Technological College is asking the Legislature for an appropriation of \$300,000 with which to build a Library Building.

#### AGRICULTURAL BUILDING

The second great need of Texas Technological College is a new Agricultural Building. The number of students in Agriculture has increased 54% in the last four years. The student load, indicating much heavier courses in Agriculture, has increased 160%.

In 1927 the Board of Directors built, out of the building fund appropriated by the Legislature, a small one-story stucco building, 88 by 50 feet, to take care of the temporary needs of the Division of Agriculture. At that time there were only 107 students in Agriculture, but there are now 370 for the year 1936-37 up to February 10. The present Agricultural Building contains the offices of the Dean and a few Department Heads, has one classroom, two laboratories, and a reading room and library for agricultural students, made very necessary because of the lack of a real library building. As explained elsewhere in this bulletin, nearly one-half of the Stock Judging Pavilion has been built into offices and classrooms for departments of the Division of Agriculture.

In the summer of 1936 the College constructed a temporary frame building, 20 by 102 feet, containing three classrooms and six offices.

In the splendid Department of Dairy Manufacturing the work is done in a meager manufacturing plant, erected out of the earnings of that department of instruction.

A temporary structure for Agricultural Engineering has also been constructed.

The whole Division of Agriculture is lacking in adequate office space, classrooms and laboratories to accommodate its rapidly growing enrollment.

There are more students in Agriculture enrolled at Texas Technological College pursuing a four-year course leading to a degree in Agriculture than at 23 out of the 48 Land Grant Colleges and Universities in the United States. There are more students in Agriculture at Tech than there are at such colleges as Arizona University, Arkansas University, Colorado Agricultural College, Connecticut Agricultural College, Florida University, Idaho University,

Kentucky University, Louisiana State University, Maine University, Maryland University, Montana State College, Nevada University, New Hampshire University, Rutgers University of New Jersey, New Mexico State College of Agriculture, North Carolina State College, North Dakota State College, Rhode Island State College, South Dakota State College, Vermont University, Virginia Polytechnic Institute, West Virginia University, and Wyoming University. Many of these institutions named have elaborate and beautiful agricultural buildings. In floor space and in opportunity to have the facilities necessary to do good work, Texas Tech has languished.

Graduate from the Division of Agriculture are always in demand. All are employed and many of them are making excellent records.

The College has excellent livestock. We have often won prizes at the Fort Worth Fat Stock Show with beef cattle, hogs and sheep. The Stock Judging Team of Texas Technological College has had an enviable record. Ours is the only team from any college outside of Land Grant Colleges which has ever won first place at the International Livestock Show in Chicago. This prize the students from Texas Tech won in the fall of 1934. In the fall of 1936 they stood fourth. The winnings at judging contests at the Fat Stock Show and at the Royal Livestock Show in Kansas City have been creditable indeed.

The Board of Directors has asked for the sum of \$250,000 with which to erect an adequate Agricultural Building for Texas Technological College.

#### HOME ECONOMICS BUILDING

The third great need of Texas Technological College is a new Home Economics Building. The present building was the first building completed on the campus when the College did not know how many students it was going to have—when the rush to open the College was on. The first two years it was occupied by both Agriculture and Home Economics. Unfortunately, the building was constructed without any great consideration of the size of rooms necessary for practical instruction in Home Economics. The building is 92 feet long, 56 feet wide, and two stories in height. It contains the offices for eleven teachers, seven laboratories, one classroom, a small reading room 13 by 20 feet, storage rooms, and toilet facilities.

The enrollment in Home Economics increased from 78 in the first vear of the College to 176 in attendance in the fall of 1932-33 and to 307 in attendance in the fall of 1936, or an increase of 74.4% in the last four years. In the summer of 1935 we built a shack or wooden frame building next to the Home Economics Building to contain two laboratories. The whole division is lacking almost completely in classroom space. The building is so inadequate that students sometimes have to do their work out in the hall. The size of rooms is such that it is impossible to increase number of units of equipment in laboratories. It is difficult to carry on where you have a laboratory which accommodates only sixteen students when it should accommodate twenty-four. This is the case with the Home Economics Building at Texas Technological College.

Read the record of the Tech graduates in Home Economics. The records of the University of Texas show that they graduated in 1935-36, 34 students with the degree of Bachelor of Science in Home Economics. Texas Technological College graduated 33 in the same year. In 1934-35 the University graduated 30, and Texas Technological College graduated 30. All we ask is a building good enough to be partly as good as that of an institution which has little more work in Home Economics than we do.

The Board of Directors of Texas Technological College has asked for the sum of \$200,000 with which to erect a new Home Economics Building. In case this is granted, the present building will be converted into a classroom building or used to accommodate the Music Department, which is sadly in need of accommodations.

#### AUDITORIUM-GYMNASIUM

The fourth great need of the Texas Technological College is an adequate Gymnasium-Auditorium. Such a building would cost from two to three hundred thousand dollars.

At present and during the last nine years at least, Texas Technological College has had no adequate place in which to hold an assembly of the entire student body.

The present Gymnasium-Auditorium was constructed in 1927. It has a level floor with elevated seats on three sides. These elevated seats are nothing but boards boxed up on inclined timbers. It is a perfect firetrap. When chairs are put on the main floor, the building will hold approximately 1800 people. The College does not have chairs for those seated on the elevated seats; therefore, they sit on the planks with no backs to lean against. When one looks above he sees nothing but wooden rafters of the character one would install in a first-class barn. The only accommodations for offices for the staff teaching Physical Education to both men and women, and all of the dressing rooms, shower baths, locker rooms, etc., are contained underneath these seats on the three sides of the Gymnasium. There were nearly 1700 men students and slightly more than 1000 women students in the College in 1935-36 with an increase for 1936-37. The Gymnasium has an auditorium that will seat only about two-thirds of the student body, and, if very greatly crowded, the faculty might be put in also. It is difficult to describe the handicaps under which the institution is laboring in attempting to teach Physical Education under such conditions and to hold convocations of students from time to time. There is no other room on the campus which will hold in excess of 250 persons. The present Gymnasium is "off-center," located at a great distance from the rest of the buildings on the campus, and a new building ought to be constructed with better facilities, more nearly accessiple and more nearly in line with the needs of the institution.

The Gymnasium is 120 feet long by 110 feet wide, outside measurements. The playing floor is 83 feet, 8 inches long (north and south) by 44 feet, 7 inches wide (east and west). The inclined seats, together with an aisle in front of them, occupy a space approximately 32 and a fraction feet on the East, West, and North sides. In the North corners space is taken out for passage-ways. The actual area underneath the seats available for Physical Education for Women is approximately 1500 square feet of space for offices, dressing rooms, toilets, lockers, and shower baths for more than a thousand girls. The available space for men is about 3500 square feet for nearly 1700 men. All freshmen and sophomores are compelled to take physical education. On this basis there were in 1935-36, 648 women required to take physical education work in this gymnasium and 1088 men. The space indicated is approximately two and one-half square feet for each girl and a little less than three and one-half square feet for each man. No one can picture the crowded character of these dressing rooms unless he has seen them when they are in use.

#### COOPERATIVE COTTAGES

Texas Technological College needs funds with which to build a number of cooperative cottages. Here students who are too poor to bear the expense of room and board in the dormitories or boarding houses could obtain board and room by cooperative effort at prices much below those now obtainable in any boarding house or in the dormitories of the College. The young men in Agriculture who are earning their way by working at the barns or on the farm, in particular, need such a cottage reasonably near to their work.

Entirely too large a group of students at Texas Technological College are renting backyard rooms over garages and other places where conditions are unsuitable, where cooperative effort on a good scale is impossible. and where the College knows from experience the students lack supervision which could be given if we had cooperative cottages on the campus.

#### STREET LIGHTS

A reasonable campus lighting system along the streets and driveways at the College is badly needed. Much work is done at the Library during the hours from seven to ten at night. Students are compelled to go and come, both to the Library and to student and other meetings on the campus, without adequate light.

#### MILITARY BUILDING

A Military Building is very badly needed, though we have at the present time a temporary building for that purpose. If the money is ever appropriated for an Auditorium-Gymnasium Building, it is probable that the plans would be so drawn as to provide accommodations for the R. O. T. C. Unit or Units of the College.

43

#### Appendix A

The Act of the State Legislature establishing the Texas Technological College, Senate Bill, 103, Thirty-Eighth Legislature, 1923.

An Act to establish a State College in Texas, west of the ninety-eighth (98th) meridian and north of the twenty-ninth (29th) parallel, to be known as the Texas Technological College; providing for the location of such College; its government; the control of its finances; defining its leading objects and prescribing generally the nature and scope of instruction to be given; conferring upon the Board of Directors of said College the rights of eminent domain; making the necessary appropriations for the purchase of land, the location, establishing and maintenance of said College and declaring an emergency.

Be it enacted by the Legislature of the State of Texas:

Section 1. There shall be established in this State a College for white students, to be known as the Texas Technological College, said College to be located north of the twenty-ninth (29th) parallel, and west of the ninetyeighth (98th) meridian, and shall be a co-educational College giving thorough instruction in technology and textile engineering from which a student may reach the highest degree of education along the lines of manufacturing cotton, wool, leather and other raw material produced in Texas, including all branches of textile engineering, the chemistry of materials, the technique of weaving, dyeing, tanning, and the doing of any and all other things necessary for the manufacture of raw materials into finished products; and said College shall also have complete courses in the arts and sciences, physical, social, political, pure and applied, such as are taught in colleges of the first class leading to the degrees of Bachelor of Science, Bachelor of Arts, Bachelor of Literature, Bachelor of Technology, and any and all other degrees given by colleges of the first class; said college being designated to elevate the ideals, enrich the lives and increase the capacity of the people for democratic selfgovernment and particularly to give instruction in technological, manufacturing, and agricultural pursuits, and domestic husbandry and home economics, so that the boys and girls of this State may attain their highest usefulness and greatest happiness and in so doing may prepare themselves for producing from the State its greatest possible wealth.

Sec. 2. The government, control and direction of the policies of said Technological College, shall be vested in a board of nine (9) directors to be appointed by the Governor, who shall hold office for a period of six (6) years. said board of nine (9) directors to be so divided that the terms of three (3) directors shall expire every two years and it shall be the duty of the Governor, in making the appointment of the first board of directors to indicate in his appointment the name of the director whose term shall expire in two (2) years, the name of the director whose term shall expire in four (4) years, and the name of the director whose term shall expire in six (6) years; all of said directors to hold their office until their successors are qualified, unless a removal is made by the Governor for inefficiency or inattention to their duties as members of such board.

The board of directors of the Texas Technological College shall provide a president therefor, who shall devote his entire time to the executive management of said school and who shall be directly accountable to the board of directors for the conduct thereof.

Sec. 3. In addition to the courses provided in technology and textile engineering, the said Texas Technological College shall offer the usual college courses given in standard senior colleges of the first class, and shall be empowered to confer appropriate degrees to be determined by the board of directors and shall offer four-year courses, two-year courses, or short-term courses in farm and ranch husbandry and economics and the chemistry of

soils and that adaptation of farm crops to the peculiar soil, climate and condition of that portion of the State in which the college is located, and such other courses and degrees as the board of directors may see fit to provide as a means of supplying the educational facilities necessary for this section of the State, and it shall be the duty of the board of directors to furnish such assistance to the faculty and students of said college as will enable them to do original research work and to apply the latest and most approved method of manufacturing and, in general, to afford the facilities of the college for the purpose of originating, developing, supporting, and maintaining all of these agencies (physical, mental and moral) for the development of the physical, mental and moral welfare of the students who attend the college and for the further purpose of developing the material resources of the State to their highest point of value and usefulness by teaching the arts of commerce and manufacturing. All male students attending this college shall be required to receive such instruction in military science and tactics as the board of directors may prescribe which shall, at all times, comply in full with the requirements of the United States Government now given as a prerequisite to any aid now extended or hereafter to be extended by the Government of the United States to State institutions of this character and all such white male students shall, during their attendance at such college, be subject to such military discipline and control as the board of directors may prescribe.

ITS GROWTH AND ITS NEEDS

Sec. 4. The chairman of the State Board of Control and the State Superintendent of Public Instruction, the President of the University of Texas. the President of the College of Industrial Arts of Texas, and the President of the Agricultural and Mechanical College of Texas shall constitute a board charged with the responsibility for the location of the Texas Technological College, a majority of whom shall be authorized to act under the terms of this bill in the location of said school; said board being restricted in the choice of location to the area mentioned in Section 1 of this act and as soon after the passage and approval of this act as practical, said locating board shall make careful investigation of proposed sites for the said institution. Consideration shall be given to climatic conditions, supply of water, accessibility and such other matters as may appropriately enter into the selection of the desirable location of an institution of this kind. It is further provided that the said locating board shall not be influenced to any degree in the determination of its selection of a location by offers and promises of bonuses and gifts, directly or indirectly, to the State of Texas, as a consideration for the location of said college at any particular places but a primary consideration which shall outweigh all others in the minds of the members of the locating board, shall be to locate this college where it can, in the future render the greatest service to the State and to the section of the United States for which it is especially intended; but this is not to be interpreted to mean that the board of directors shall not have authority to accept gifts of land, money for student loans, permanent improvement or any other objects of value when tendered for the purpose of more completely carrying out the purpose of this act; said gifts to be made after said school is located and established and if a suitable location for said college is offered by any city or community. The lands bought shall be so located that the administration building will be within convenient distance to the residence section of the town where located, or the place where the students reside.

Sec. 5. The said locating board shall have authority to select approximately two thousand (2,000) acres of land for the site of said college and agree with the owner or owners thereof upon the price to be paid therefor. which said agreement shall be reduced to writing, and by the said locating board signed and delivered to the board of directors herein provided for, who shall thereupon have full authority to contract for the purchase of said land for said purpose, and upon the approval of the title thereto by the Attorney General of the State of Texas, to pay for said land and any improvements thereon in any sum not to exceed one hundred and fifty thousand (\$150,000) dollars.

- Sec. 6. It is further provided that, when said locating board has selected a site for said college, it shall be the duty of said board to make a full and complete report of all details connected with the selection of the site for the said college to the Governor of the State of Texas. The filing of this report with the Secretary of State shall legally constitute the establishing of the college.
- Sec. 7. The board of directors of the said Texas Technological College is hereby vested with the powers of eminent domain to acquire for the use of said college such land as may be necessary for the purpose of carrying out its purpose by condemnation proceedings such as are now provided for railroad companies under the laws of the State of Texas.
- Sec. 8. There is hereby appropriated from the general revenue of the State, not otherwise appropriated, the following sums, or so much thereof as may be necessary.
- 1. Twenty-five hundred (\$2,500) dollars of the available revenue of the State, or so much thereof as may be necessary, to become available upon the passage and approval of this act, for the purpose of paying the expenses of the locating board in determining the location of said institution.
- 2. One hundred and fifty thousand (\$150,000) dollars of the available revenues of this State, or so much thereof as may be necessary, to become available September 1, 1923, for the purchase of the necessary lands for the location and establishment of said school, and any portion of which amount not used for the purchase of lands shall be available for the purposes provided in the following sections thereof.
- 3. Five hundred thousand (\$500,000) dollars for the fiscal year ending August 31, 1924, for the purpose of providing necessary utilities, machinery, permanent improvements, equipment and buildings for said college.
- 4. Three hundred and fifty thousand (\$350,000) dollars for the fiscal year ending August 31, 1925, for the purpose of providing necessary utilities, machinery, permanent improvements, equipment and buildings for said college; and
- 5. In the event any portion of the sums hereby appropriated should not be used for and during the year for which they are hereby appropriated, such sums shall become available for the succeeding year, for the purpose herein provided, and for no other.
- Sec. 9. The fact that Texas is producing annually millions of dollars worth of raw materials, which are being shipped to distant factories to be made into finished products, together with the fact that Texas has no adequate institutions for teaching technology and the art of textile manufacturing and the fact that the needs of that portion of the State where this college shall be located are inadequately supplied with educational institutions, create an emergency and an imperative public necessity for this act to take effect at once and for the suspension of the constitutional rule requiring bills to be read on three several days, it is therefore enacted that said rule be suspended and this act take effect and be in force on and after its passage.

### Appendix B

COMPARATIVE ENROLLMENT IN TECHNICAL COURSES OF LAND GRANT COLLEGES AND THE TEXAS TECHNOLOGICAL COLLEGE, 1935-36

#### INSTITUTION

#### ENROLLMENT

				TO DELIVED IN I			
	Total Enrollment Long Session	Agriculture	Forestry	Engineering	Home Economics	Business Administration	Wdt
TEXAS TECHNOLOGICAL COLLEGE	2,748	316		489	The second second		Luucation
Alabama Polytechnic Institute	9 970	377			294	468	183
Arizona University	2510	151		836	122		434
Arkansas University	1 000	179		315	91	454	201
Camorina University	10 270	889		256	101	115	299
Colorado Agricultural College	1 700	235	410	1,462		1,286	1,248
Connecticut Agricultural College	010	128	419	307	294		
Fiorida University	9 950			66	79		
Georgia University	2,000	186		363		518	186
Idaho University	2,001	335	191	78	229	450	324
Illinois University	2,303	223	303	335		350	532
Purdue University (Indiana)	1545	700		1,505	393	1,952	599
Iowa State College	4,040	400	162	2,573	467	2,002	099
Kansas State Agricultural College	5,365	869	318	1,277	1,012		
Kentucky University	3,453	559		914	521		
Louisiana State University	3,269	241		406	139	621	004
Maine University	5,546	193	69	398	107	274	364
Maine University Maryland University	1,384	145	131	347	138	214	414
Maryland University	3,266	207		315	140		42
Michigan State College	4,051	337	304	560	548		312
Minnesota University	14,522	398	488	1,841			
Mississippi Agricultural College	1 520	364		414	504	560	1,693
Missouri Univeristy	4,206	560		781	100	362	154
Montana State College	1 202	151		376	103	232	302
Nebraska University	6 150	343			151	249	
Nevada University	004	55		704	301	1.049	1,061
New Hampshire University	1.574	93	69	202	45		35
		00	09	334	92	123	65

	Total Enrollment Long Session	Agriculture	Forestry	Engineering	Home Economics	Business Administration	Education
Rutgers University (New Jersey)	2,557	213		185	106	157	131
New Mexico State College of Agricult							
and Mechanic Arts		135		161	51	51	
Cornell University (New York)		1,257		963	650		
North Carolina State College		268	229	769		172	198
North Dakota State College		253		293	224		147
Ohio State University		834		1,485	387	2,442	2,240
Oklahoma Agricultural and Mechanica							
College	3,953	749		830	419	850	378
Oregon State College	3,301	478	431	594	424	467	239
Pennsylvania State College		563	439	1,162	302		540
Rhode Island State College	1,137	112		262	177	246	
Clemson College (South Carolina)		375		494			147
South Dakota State College		178	40	169	120		
Tennessee University		504		453	398	352	441
Texas Agricultural and Mechanical							
College	3.542	1,305		1,560			
Utah State Agricultural College	2,550	385	368	244	283	487	317
Vermont University		62		114	83		68
Virginia Polytechnic Institute		232		940		282	9:
Washington State College		419		551	283		160
West Virginia University		175		395	151		79
Wyoming University		145		229	62	222	34'

Architecture is combined with engineering at all colleges because it is combined at Texas Tech.
 All data taken from Circular No. 168, Office of Education, U. S. Department of Interior, entitled "Preliminary Report, Land Grant Colleges and Universities, Year Ending June 30, 1936", pages 8 and 9.
 Where Home Economics, Business Administration and teacher training are not given, no figures are given in the tables from which this table is assembled.
 Forestry is given in those states where there is a school of forestry to show possible total in agriculture—no forestry being given at Texas Tech.