

**BULLETIN**  
**OF**  
**The Georgia School**  
**of Technology**

**ORGANIZED 1888**

**A School of Mechanical, Electrical, Civil and  
Textile Engineering, Engineering Chemistry,  
Chemistry, Architecture, Commerce and  
Industrial Education**

**A Department of the University of Georgia**

**CATALOG NUMBER**

**1917-1918**

**Entered at the postoffice in Atlanta as second class matter,  
Under act of Congress, July 16, 1894**

**Published Five Times a Year, in  
January, April, July, August, October**

**VOL. XV.**

**NO. II.**

## CALENDAR • 1918

JANUARY.							JULY.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	1	2	3	4	5	6
6	7	8	9	10	11	12	7	8	9	10	11	12	13
13	14	15	16	17	18	19	14	15	16	17	18	19	20
20	21	22	23	24	25	26	21	22	23	24	25	26	27
27	28	29	30	31	..	..	28	29	30	31	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
FEBRUARY.							AUGUST.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	..	..	..	1	2	3
3	4	5	6	7	8	9	4	5	6	7	8	9	10
10	11	12	13	14	15	16	11	12	13	14	15	16	17
17	18	19	20	21	22	23	18	19	20	21	22	23	24
24	25	26	27	28	..	..	25	26	27	28	29	30	31
..	..	..	..	..	..	..	..	..	..	..	..	..	..
MARCH.							SEPTEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14
10	11	12	13	14	15	16	15	16	17	18	19	20	21
17	18	19	20	21	22	23	22	23	24	25	26	27	28
24	25	26	27	28	29	30	29	30	..	..	..	..	..
31	..	..	..	..	..	..	..	..	..	..	..	..	..
APRIL.							OCTOBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	1	2	3	4	5	6	..	..	1	2	3	4	5
7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	20	21	22	23	24	25	26
28	29	30	..	..	..	..	27	28	29	30	31	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
MAY.							NOVEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	1	2	3	4	..	..	..	..	..	1	2
5	6	7	8	9	10	11	3	4	5	6	7	8	9
12	13	14	15	16	17	18	10	11	12	13	14	15	16
19	20	21	22	23	24	25	17	18	19	20	21	22	23
26	27	28	29	30	31	..	24	25	26	27	28	29	30
..	..	..	..	..	..	..	..	..	..	..	..	..	..
JUNE.							DECEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	..	..	..	..	..	..
3	4	5	6	7	8	9	1	2	3	4	5	6	7
10	11	12	13	14	15	16	8	9	10	11	12	13	14
16	17	18	19	20	21	22	15	16	17	18	19	20	21
23	24	25	26	27	28	29	22	23	24	25	26	27	28
30	..	..	..	..	..	..	29	30	31	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..

## CALENDAR • 1919

JANUARY.							JULY.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	1	2	3	4	..	..	1	2	3	4	5
5	6	7	8	9	10	11	6	7	8	9	10	11	12
12	13	14	15	16	17	18	13	14	15	16	17	18	19
19	20	21	22	23	24	25	20	21	22	23	24	25	26
26	27	28	29	30	31	..	27	28	29	30	31	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
FEBRUARY.							AUGUST.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	..	1	..	..	..	..	..	1	2
2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	17	18	19	20	21	22	23
23	24	25	26	27	28	..	24	25	26	27	28	29	30
..	..	..	..	..	..	..	31	..	..	..	..	..	..
MARCH.							SEPTEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	..	1	..	1	2	3	4	5	6
2	3	4	5	6	7	8	7	8	9	10	11	12	13
9	10	11	12	13	14	15	14	15	16	17	18	19	20
16	17	18	19	20	21	22	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30	..	..	..	..
30	31	..	..	..	..	..	..	..	..	..	..	..	..
APRIL.							OCTOBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	5	6	7	8	9	10	11
13	14	15	16	17	18	19	12	13	14	15	16	17	18
20	21	22	23	24	25	26	19	20	21	22	23	24	25
27	28	29	30	..	..	..	26	27	28	29	30	31	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
MAY.							NOVEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	..	..	1
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30	31	23	24	25	26	27	28	29
..	..	..	..	..	..	..	30	..	..	..	..	..	..
JUNE.							DECEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	1	2	3	4	5	6
8	9	10	11	12	13	14	7	8	9	10	11	12	13
15	16	17	18	19	20	21	14	15	16	17	18	19	20
22	23	24	25	26	27	28	21	22	23	24	25	26	27
29	30	..	..	..	..	..	28	29	30	31	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..

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## CALENDAR, 1918-19.

### First Term.

Begins 8:00 A. M., September 18, 1918; ends 8 A. M., February 3, 1919.

Entrance Examinations and Re-examinations begin September 13, 1918. Schedule of these examinations will be mailed to applicants after August 1, 1918.

Christmas vacation begins at 11 A. M., December 21, 1918, ends 8:00 A. M., January 2, 1919.

### Second Term

Begins 8:00 A. M., February 3, 1919; ends June 11, 1919.

Commencement Day, Wednesday, June 11, 1919.

By order of the Board of Trustees, the only Holidays to be observed are Thanksgiving Day and Memorial Day (April 26th.)



## OFFICERS OF ADMINISTRATION.

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<hr/>	
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<i>Superintendent of Dormitories</i>	
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<i>Director A. French Textile School</i>	
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<i>Director of Industrial Education</i>	
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<i>General Secretary of the Y. M. C. A.</i>	
ESTELLE ALLEN ..... College Park, Ga.	
<i>Secretary to the Registrar.</i>	
MINNIE LaFEVRE ..... 861 Peachtree St.	
<i>Secretary to the President</i>	
AUGUSTUS GEORGE ALLEN ..... 154 Hemphill Ave.	
<i>Steward of the Dining Hall</i>	

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KENNETH GORDON MATHESON, A.M., LL.D. ..	142 W. North Ave.
<i>President</i>	
WILLIAM HENRY EMERSON, Ph.D., Sc.D. ....	160 W. North Ave.
<i>Professor of Chemistry</i>	
JOHN SAYLER COON, M.E., Sc.D. ....	26 Kimball St.
<i>Professor of Mechanical Engineering; Superintendent of Shops</i>	
THOMAS PETTUS BRANCH, B.E. ....	4 St. Charles Ave.
<i>Professor of Civil Engineering</i>	
JESSE BOLAND EDWARDS, B.S., E. and M.E. ....	32 Prospect Place
<i>Professor of Physics</i>	
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<i>Professor of Modern Languages</i>	
SAMUEL STUART WALLACE, A.M., Pd.D., Litt.D. ....	76 Inman Circle
<i>Professor of English</i>	
FLOYD FIELD, A.B., A.M. ....	91 Bryan St.
<i>Professor of Mathematics</i>	
FRANCIS PALMER SMITH, B.S. in Arch. ....	126 Techwood Drive
<i>Professor of Architecture</i>	
RICHARD HENRY LOWNDES, B.S. in M.E. ....	65 Blue Ridge Ave.
<i>Professor of Drawing</i>	
ROBERT DAVIS KNEALE, B.S., C.E. ....	630 Highland Ave.
<i>Professor of Highway Engineering</i>	
JOHN MADISON WATTERS, B.C.S., LL.B., M.Accts. ....	4 Howard St.
<i>Professor of Commerce</i>	
ELMER W. HUBBARD, Lieut.-Col., U. S. A., Ret. ....	78 W. North Ave.
(West Point 1885, U. S. Artillery School 1896)	
<i>Professor of Military Science and Tactics</i>	
CALVIN POWELL ELDRED, S.B. ....	250 W. Peachtree St.
<i>Professor of Electrical Engineering</i>	
ROY STEVENSON KING, M.E., M.Sc. ....	228 N. Williams St.
<i>Professor of Experimental Engineering</i>	
CLARENCE B. SEAL ..... Ga. Tech.	
<i>Professor of Textile Engineering</i>	
EMMETT PAGE TRACY, C.E. ....	300 W. Peachtree St.
<i>Professor of Industrial Education</i>	
GILBERT HILLHOUSE BOGGS, B.S., Ph.D. ....	383 Williams St.
<i>Associate Professor of Chemistry</i>	
WILLIAM GILMER PERRY, A.M., Litt.D. ....	83 W. North Ave.
<i>Associate Professor of English</i>	

# Georgia School of Technology

WILLIAM VERNON SKILES, A.M.	306 Myrtle St.
<i>Associate Professor of Mathematics</i>	
DANIEL STANLEY ELLIOTT*, A.M., Ph.D.	554 Spring St.
<i>Associate Professor of Physics</i>	
WILLIAM STOCKTON NELMS, A.M., Ph.D.	91 W. North Ave.
<i>Associate Professor of Physics</i>	
EDMOND WEYMON CAMP, B.S. in T.E.	Kirkwood, Ga.
<i>Associate Professor of Textile Engineering; Assistant Director of Textiles</i>	
ALLAN BENTON MORTAN, A.M.	239 E. Pine St.
<i>Assistant Professor of Mathematics</i>	
JAMES HERBERT GAILEY, B.S., M.S. in Arch.	12 E. North Ave.
<i>Assistant Professor of Architecture.</i>	
HERBERT ALBERT WEISS, M.E.	19 W. Linden St.
<i>Assistant Professor of Drawing</i>	
JOHN LAURENCE DANIEL, M.A.	Decatur, Ga.
<i>Assistant Professor of Chemistry</i>	
DAVID M. SMITH, Ph.D.	36 E. North Ave.
<i>Assistant Professor of Mathematics</i>	
ALEX VALLANCE, M.E.	306 E. 4th St.
<i>Assistant Professor of Experimental Engineering</i>	
CHARLES W. LYTLE, M.E.	45 Currier St.
<i>Assistant Professor in Charge of Co-ordination</i>	
ROGER SHEPPARD HOWELL, B.S. in M.E.	Tech. Y. M. C. A.
<i>Assistant Professor of Experimental Engineering</i>	
ERNEST DEAN TANZER, E.E.	659 W. Peachtree St.
<i>Assistant Professor of Electrical Engineering</i>	
BENJAMIN BLACKISTON WROTH, A.B., Ph.D.	40 W. North Ave.
<i>Assistant Professor of Chemistry</i>	
ARTHUR HAMMOND ARMSTRONG, A.B., A.M.	177 W. North Ave.
<i>Instructor in English</i>	
CHARLES ALFRED JONES, B.S. in T.E.	Vinings, Ga.
<i>Instructor in Textile Engineering and Dyeing</i>	
DAVID LESLIE STAMY, A.M.	78 W. North Ave.
<i>Instructor in Mathematics.</i>	
HARRY C. HEBDEN	61 W. Dargan Place
<i>Instructor in Textile Engineering</i>	
JAMES HUGH McKEE, A.M.	453 Luckie St.
<i>Instructor in English</i>	

\*Absent on leave with School of Military Aeronautics.

# Faculty and Instructors

BERNARD SMITH, B.S. in E.E., M.E.	College Park
<i>Instructor in Drawing</i>	
J. FLINT WALLER, A.B.	Owens Apartment
<i>Instructor in Chemistry</i>	
HOWARD ALBERT VIERHELLER, B.S. in C.E.	894 Peachtree St.
<i>Instructor in Civil Engineering and Drawing</i>	
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<i>Instructor in Mercantile Credits and Accounting</i>	
WAYNE SAILLEY KELL, E.M., C.P.A.	Chamber of Commerce
<i>Instructor in Management and Finance</i>	
GEORGE DAWSON HALSEY, C.E.	City Hall
<i>Personnel and Labor Problems</i>	
JOHN OLIVER CAMPBELL, C.P.A.	J. P. McCrary Co.
<i>Accounting and Finance</i>	
HAMILTON DOUGLAS, JR., A.B., LL.B., Ph.M.	Douglas & Douglas
<i>Law</i>	
DUDLEY GLASS	Atlanta Georgian
<i>Journalism</i>	
COMER T. JONES, B.C.S.	Commercial High School
<i>Business English and Salesmanship</i>	
JOHN EDWIN STARK, A.B.	50 W. North Ave.
<i>Instructor in Commerce</i>	
EMORY BERTRAM PHILLIPS, B.S. in E.E.	438 W. Peachtree St.
<i>Instructor in Electrical Engineering</i>	
EDWARD ROY CECIL MILES, B.S. in E.E.	570 S. Boulevard
<i>Instructor in Mathematics</i>	
JOSEPH A. CAMPOAMOR, M.A.	401 Grand Bldg.
<i>Instructor in Modern Languages</i>	
LESTER COLLINS FARRIS, A.B., A.M.	394 Williams St.
<i>Instructor in English</i>	
ROBERT LAW LASLEY, A.B., A.M.	394 Williams St.
<i>Instructor in English</i>	
CARLYLE PEEK, B.S. in Arch.	568 Spring St.
<i>Instructor in Drawing</i>	
ANTHONY A. GAVEY, B.S.	435-B Spring St.
<i>Instructor in Chemistry</i>	
WALTER WHITE STEFFEY, A.B.	142 W. Peachtree St.
<i>Instructor in Physics</i>	
FRANCIS FULLER MERRIAM	College Park, Ga.
<i>Instructor in Signalling</i>	



# Georgia School of Technology

THOMAS RANDLE WEEMS	-----	152 Lee St.
<i>Instructor in Physical Culture</i>		
EDWARD BENBOW MARTINDALE	-----	204 Plum St.
<i>Principal Foreman; Foreman of Machine Shop</i>		
HORACE ALONZA THOMPSON	-----	9 Willard Ave.
<i>Foreman of Smith Shop</i>		
WILLIAM VAN HOUTEN	-----	185 Plum St.
<i>Foreman of Foundry</i>		
JOHN HENRY HENIKA	-----	110 Oak St.
<i>Foreman of Wood Shop</i>		
WILLIAM FELDER GRIFFIN	-----	48 Hemphill Ave.
<i>Instructor in Machine Shop; Chief Engineer</i>		
HOMER HARLAN NORMAN	-----	312 W. 4th St.
<i>Instructor in Wood Shop</i>		
WILLIAM CLEVELAND ADAMSON	-----	327 Luckie St.
<i>Instructor in Machine Shop</i>		
HENRY PRINTUP	-----	10 Mell Ave.
<i>Instructor in Wood Shop</i>		
DAVID ERNEST PHILPOT	-----	2 Tifton St.
<i>Instructor in Textile Engineering</i>		
JOSEPH WARREN PATILLO	-----	140 Metropolitan Ave.
<i>Instructor in Wood Shop</i>		
AUGUSTUS THEODORE PEACOCK	-----	49 Pearce St.
<i>Instructor in Machine Shop</i>		

## STUDENT ASSISTANTS.

SIDNEY JOHNSON STUBBS	-----	<i>Assistant in Civil Engineering</i>
GEORGE M. HARRINGTON	-----	<i>Assistant in Highway Engineering</i>
DANIEL CURTIS RAND	-----	<i>Assistant in Chemistry</i>
CHARLES ARDEN TUCKER	-----	<i>Assistant in Architecture</i>
KENNETH HOLMES MERRY	-----	<i>Assistant in Mathematics</i>
ISAIAH HAMILTON TILLMAN	-----	<i>Assistant in Experimental Engineering</i>
OTIS OTT RAE	-----	<i>Assistant in Physics</i>
WILLIAM ALFRED MORGAN	-----	<i>Assistant in Chemistry</i>

## Standing Committees of the Faculty.

The President is *ex-officio* a member of all standing committees.

*Absences.*—Professors Perry, Morton and Seal.

*Accredited Schools.*—Professors Branch, Field, Edwards, and Caldwell.

*Athletics.*—Professors Crenshaw, Wallace and Elliott.

*Buildings and Grounds.*—Professors Coon and Lowndes.

*Committee on Standing.*—Professors Emerson, Skiles and Boggs.

*Courses of Study.*—Professors Emerson, Branch and Skiles.

*Honor System.*—Professors Emerson, Wallace and Crenshaw.

*Library.*—Professors Boggs, Perry and F. P. Smith.

*Rules and Regulations.*—Professors Emerson, Branch and Eldred.

*Schedule Committee.*—Professors Branch, King and Waters.

*Commencement Program.*—Professors Wallace, Crenshaw, Perry, Skiles, and Morton.

*Student Activities.*—Professors Emerson, Wallace, Field, F. P. Smith, and Perry.

## STUDENTS 1917-1918.

Note—The students whose names are printed in heavy type and starred constitute the Honor Roll of the class.

## Senior Class.

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Allen, M. C.	Gordon	Irvin, C. W.	Wilkes
*Arnold, D. J.	Henry	*Kelly, Edw.	Jackson
Bailey, T. L.	Bleckley	Kenimer, J. G.	White
Baker, A. W.	Fulton	King, J. R.	Floyd
Beacham, E. W.	S. Carolina	Livar, A. P.	Mississippi
Beall, F. R.	Fulton	Lovell, W. S.	Gwinnett
Beall, R. W.	Richmond	Manly, W. J.	Whitfield
Blackwell, C. B.	Fulton	Massee, T. C.	Bibb
Blackwell, G. W. Jr.	Fulton	Merry, K. H.	Richmond
Bobbitt, R. E.	Louisiana	*Mills, R.	Gordon
*Boyer, I. B.	Arkansas	Milner, C.	Fulton
Bradley, F., Jr.	Muscogee	Montag, H. E.	DeKalb
Brim, S. A.	Terrell	O'Kelly, R. E., Jr.	Fulton
Brown, R. T.	DeKalb	Pharr, R. N.	Gwinnett
Brownson, W. C.	N. Carolina	Phillips, C. F.	Fulton
*Budd, J. S.	Bibb	*Pope, M. C., Jr.	Wilkes
Carder, W. W.	Fulton	Rae, O. O.	Richmond
Carpenter, W. G.	Coweta	*Rand, D. C.	Fulton
Carswell, E. D.	Fulton	Reynolds, H.	Fulton
Cates, R. V.	Ben Hill	Robinson, A. A.	N. Carolina
Cole, E. M., Jr.	Coweta	Rumble, J. E.	Fulton
Collins, W. I.	N. Carolina	Sams, L. R.	Fulton
Cooper, F. H.	Cobb	Sanders, M. R.	Hall
Crosby, W. L.	Florida	Scott, F. W.	Fulton
Cutter, H. D., Jr.	Bibb	Scott, W. B. Jr.	Fulton
Dawes, E. E.	Fulton	Shaw, J. W.	Fulton
Dickson, H. G.	Morgan	Siegel, M.	Chatham
Dodd, J. A.	Bartow	Smith, C. D.	Fulton
Dowe, R. M.	Fulton	Smith, D. O., Jr.	Fulton
DuBose, S. I.	Fulton	Steinberg, A. K.	Richmond
Dunwoody, K. W.	Bibb	Stoffregen, C. W.	Floyd
Duson, W. W., Jr.	Louisiana	Strupper, G. E.	Muscogee
Ellis, A. C.	Richmond	Stubbs, S. J., Jr.	Coffee
Ferguson, W. P.	Glascok	Thomas, F. G.	DeKalb
Funkhouser, J. C.	New Jersey	Tillman, I. H.	Lowndes
Gartner, E. C.	Sumter	Tucker, C. A.	Fulton
Golding, D. S.	Texas	Turner, H. L., Jr.	Thomson
Grady, H. W., Jr.	Fulton	*Turner, J. P., Jr.	Muscogee
*Granger, G.	Fulton	*Vaughan, J. W., Jr.	Barrow
Gross, W. E.	Muscogee	Walker, J. S.	Cobb
Guill, M. F.	Sparta	Whitner, J. T.	Fulton
Harrington, G. M.	Liberty	Willett, J. L.	Fulton
Henderson, U. V.	Dooly	Wrench, F. A., Jr.	Whitfield
Holcomb, J. B.	Haralson	Young, W. G.	McIntosh
Humphreys, J. W.	Louisiana		

## Co-operatives.

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Branch, T. P.	Fulton	Rouse, J. H.	Lowndes
Ezzard, H. S.	Whitfield	Speir, W. P.	Jefferson

## Special Architecture No. 2.

Tucker, M. A. -----Fulton

## Special Textile No. 2.

*Ivens, H. J.	Louisiana	Torrence, C. K.	N. Carolina
McCaskill, J. C., Jr.	Decatur	VanDerburgh, W. D.	Monroe

## Junior Class.

Adkins, T. B.	Dooly	*Frasuer, F. H.	Crisp
Alden, C. E.	DeKalb	Gessner, F. B.	Louisiana
Alexander, L. G.	Monroe	*Gill, L. M.	DeKalb
Arnold, S. R.	Fulton	Godard, W. W.	Pike
Bardwell, R.	Fulton	Graves, R. C.	Floyd
Beers, C. H.	Penn.	Griffith, R. S.	Kentucky
Bergen, C. W.	Chatham	Hall, G. H.	Fulton
Betterton, P. M.	Tennessee	Hall, T. H.	Bleckley
Biggers, R. H.	Newton	Hanneman, J. F.	Fulton
Blasingame, T. T.	Richmond	Henderson, R. B.	Jasper
Bohannon, J. N.	N. Carolina	*Herzog, M. A.	Fulton
Boswell, B. C.	Greene	*Hickenlooper, H. C.	Florida
Boughton, S. P.	Morgan	Hightower, J. T.	Upson
Bradley, F. B.	Muscogee	Hill, A. B.	Wilkes
Brewster, T. D.	Coweta	Hinkle, J. B.	Bibb
Brittingham, T. H.	Richmond	Hirsch, H. I.	Muscogee
Broach, R. C.	Walton	Holliday, F. L.	Wilkes
Bryan, F. S.	Greene	Holst, B. B.	Fulton
Bryant, W. G.	Fulton	Houser, W. D.	Perry
Burford, S. K.	Florida	Howard, G. P., Jr.	Fulton
*Carreker, J. F.	Pike	Hunt, S. S.	Hodge
Champion, E. F.	Elbert	Jackson, K. C.	Fulton
Cloud, F. J.	N. Carolina	Jewell, R. H.	Walker
Cobb, H. N.	Fulton	Johnston, J. H.	Fulton
Colcord, A. R.	Fulton	Jones, C. C.	Sumter
Cole, T., Jr.	Coweta	Jones, G. L.	Kansas
Courier, E. P.	Glynn	*King, G. D.	DeKalb
Cowan, F. A.	Fulton	Kreis, J. W., Jr.	Fulton
*Crook, L. E., Jr.	Mississippi	Kuniansky, M.	Fulton
Crymble, A. C.	Virginia	Lewin, H. H.	Fulton
Daniel, L. C.	Fulton	Lewis, A. S.	Fulton
Downman, A. E., Jr.	DeKalb	McCarley, L. H.	Tennessee
Eubanks, J. F.	Fulton	McCrea, W. W.	Tift
Fife, C. L.	Fayette	McEver, W. L.	Habersham
Frankel, J. S.	Fulton	McMurry, J. A.	Fulton



# Georgia School of Technology

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
McNeel, M. L., Jr.	Cobb	Salter, M. T., Jr.	Fulton
MacKay, A. J.	Florida	Sanders, R. G.	Texas
Manget, H. F.	Fulton	Saunders, W. H.	Thomas
Mann, R. A.	Ben Hill	Scarborough, H. E.	Clayton
Moise, H.	Fulton	*Scharff, D. L.	Mississippi
Morgan, W. A.	Habersham	Semmes, T. J.	Tennessee
Nesbit, M. M.	Gwinnett	Simmons, J. H.	Fulton
Nichols, P. H.	Fulton	Skeen, J. H.	Tift
Owens, F. C.	Fulton	Smith, R. H.	Bibb
Paisley, J. K.	Fulton	Smith, W. D.	Fulton
Parker, W. A., Jr.	Fulton	Souza, F. X.	S. America
Parkinson, R. D., Jr.	Chatham	Stevens, P. S.	Mississippi
Patillo, L. B.	Gwinnett	Thornton, G.	Virginia
Powell, H. J.	Jasper	Walker, R.	Fulton
Prather, P.	Pickens	Wallis, L. E.	Elbert
Price, H. J.	Texas	Ward, J. A.	Wayne
Pugh, G. W., Jr.	Stewart	White, D. A.	Butts
Pund, E. E.	Richmond	Wikle, J. R.	Fulton
Raine, G. B.	Fulton	Wilcox, W. A.	Ben Hill
Richards, H. L.	Florida	Williams, B. B.	Jones
Roberts, J. T.	Jefferson	*Williams, T. B.	Sumter
Robinson, R. M.	Fulton	Wilson, C. E.	Campbell
Robinson, W. W.	Alabama	Wise, R. J.	Greene
Rogers, J. C.	Tennessee	Wood, T. L.	Washington
Ruggles, C. A.	DeKalb	Wright, H. E.	Mississippi
Russell, R. L.	Fulton	*Zacharias, E. G.	Decatur

## Co-operatives.

First Junior	Second Junior
Enloe, R.	Curtis, T. R.
Hardin, R. W.	Davis, H. C., Jr.
Smith, W. E.	Warren, J. C.

## Sophomore Class.

Adams, S. T.	Elbert	Bell, R. S.	Spalding
Aichel, C. G.	S. Carolina	*Betts, R. B.	Floyd
Almond, G. L.	Elbert	Bewick, R. H.	Fulton
Anderson, L. E.	Tatnall	Birch, J. N., Jr.	Bibb
Ansley, G. E.	Sumter	Blair, A., Jr.	Bibb
Arnall, H. C.	Coweta	Bobbitt, G. L.	N. Carolina
Asbury, J. S.	Elbert	Bond, C. F.	Franklin
Askew, B. S.	Coweta	Bone, W. J., Jr.	Fulton
Ballard, E. D.	Jasper	Bowen, A. S., Jr.	Walker
Barnes, M.	Fulton	Brennan, J. C.	Chatham
Basarrate, O.	Cuba	Brimberry, W. H.	Jefferson
Battle, W. W.	Muscogee	Brown, G. S.	DeKalb
Beall, R. A.	Richmond	Brown, J. W.	Jefferson
Bee, E. S.	Mississippi	Browne, G. Y., Jr.	Putnam
Beeland, H. D.	Bibb	*Brumby, L. R.	Cobb

# Students 1917-18

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Bucknell, W. H.	Fulton	Hill, H. D.	Wilkes
Burks, B. F.	Fulton	Hilley, R. D.	Cobb
Burr, C. E.	Florida	*Hillhouse, R. M.	Worth
Busch, L. R.	Laurens	Hitt, A. S.	Clayton
*Carr, J. L.	Alabama	*Holleman, E.	DeKalb
Carter, Jno. J., Jr.	Florida	Holland, D.	Florida
Cloud, O. L.	N. Carolina	Horton, G. R.	Polk
Cobb, D. K.	Grady	Howden, F. J.	Chatham
Cockrill, S. B.	Tennessee	Hudgins, B. B.	Hancock
Colley, T. N.	Coweta	Hughes, H. H.	DeKalb
Conoley, J. J.	Fulton	Humphrey, D. G.	Fulton
Correa, J.	S. America	Hurt, T. W.	Fulton
Crumley, H. L., Jr.	Fulton	Ingram, L. C.	Coweta
Davis, R. G.	Tennessee	Ittner, H. D.	Fulton
Dawson, L. Y., Jr.	S. Carolina	Jarrard, B. H.	Pickens
Dearing, P. M.	Newton	Jerger, W. D.	Thomas
deNeergaard, C. G.	N. Carolina	Johns, W. B., Jr.	Morgan
Dimon, C. E.	Muscogee	Johnson, C. E., Jr.	Fulton
Dortch, N. F.	Pulaski	Johnson, R. C.	Sumter
Douglas, P. M.	Talbot	Kahrs, H. D.	Richmond
Dowling, J. H.	Florida	Kemp, W. R.	Calhoun
Dunlap, E. F.	Fulton	Kent, L. F.	Cobb
Erwin, J. C.	N. Carolina	King, R. L.	Alabama
Farmer, H. A.	Coweta	Kinnebrew, E. R.	Fulton
Fellers, W. S.	Ohio	Kling, W. L.	Chattooga
Ferst, H. W.	Chatham	Kruse, J. R.	Florida
Fife, R. T.	Fayette	LeCraw, R. V.	Fulton
Fincher, W. E.	Fulton	Lee, P. A.	Florida
Fletcher, H. M., Jr.	Butts	Lester, G. N. Jr.	Virginia
Fluker, W. T.	McDuffie	Limbaugh, H. P.	Florida
Fraser, G. R.	Fulton	Link, E. C.	Fulton
Freeman, J. W.	Putnam	Little, A. J. Jr.	Richmond
Garrett, H. O.	Muscogee	Lunsford, R. C.	Cobb
Garrison, S. W.	Fulton	McCash, P. K.	Fulton
Genovar, W. P., Jr.	Florida	McDaniel, T. W.	Gwinnett
Gibson, G. H.	Richmond	McEachern, J. N., Jr.	Fulton
Giddens, H.	Muscogee	McIver, D.	Fulton
Gilbert, S. P.	Muscogee	McMath, H.	Muscogee
*Glisson, W. R.	Bibb	*McNeice, R. D.	Upson
Gooch, R.	Putnam	McNeill, W. A.	Sumter
Gorham, J. M.	Pickens	McPherson, C. M.	Fulton
Graybill, T.	Washington	MacDonald, Jas.	Mississippi
Griffin, G. C.	Fulton	Mackenzie, R. E.	N. Carolina
*Guess, S. Y.	Mississippi	Manget, V.	Fulton
Guest, W. C.	S. Carolina	Manning, G. E.	Richmond
Guy, Edw. W.	S. Carolina	Manning, L. J.	Florida
Guyon, J. N.	New Mexico	Mason, J. W., Jr.	Tennessee
Hamlett, J. E.	Fulton	Mathewson, J. H.	Fulton
Hardy, W. F.	Jasper	Mercer, W. G.	Terrell
Havis, E. H.	Fulton	Merriam, J. W.	Florida
Heath, J. M., Jr.	Talbot	Merry, E. R.	Fulton
Herron, J. R.	N. Carolina	Millard, J. W.	Fulton

## Georgia School of Technology

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Milner, S. W.	Fulton	Sheffield, F., Jr.	Sumter
Minyard, J. P.	Mississippi	Sheffield, I. M.	Fulton
Mullally, C. L.	S. Carolina	Shelverton, W. L.	Wilkes
Murphy, M. V.	Fulton	Sherlock, C. J.	Sumter
Murrah, W. N.	Muscogee	Short, W. B.	Marion
Murray, S. E.	Spalding	Simpson, W. F.	Fulton
Myddleton, R. H.	Lowndes	Sims, W. R.	Wilkes
Nelms, J. B.	Hart	Sledge, E. D.	Clarke
Newton, R. B.	Bibb	Smith, B. F.	Elbert
Nowell, E. N.	Walton	Smith, I. H.	Newton
Nuckolls, J. T.	Muscogee	Smith, J. F.	Mississippi
Oldknow, O. S.	Fulton	Smith, J. L.	Newton
Orlow, H.	Lowndes	Sommerfield, A. W.	Fulton
Parramore, R. L.	Lowndes	Springer, W. K.	Fulton
Pearsall, L. M.	Ware	Stanfield, J. H.	Tennessee
Phillips, G. D.	W. Virginia	Stearns, H. L., Jr.	Fulton
Phillips, G. M.	Fulton	Stevens, L. T.	Fulton
Phillips, I. J., Jr.	Hart	Strickland, C. E.	Gwinnett
Pittman, W. O.	Jackson	Taliaferro, R. H.	Muscogee
Plough, M.	Tennessee	Tanner, W. M.	Gwinnett
*Pollard, L. W.	Florida	Thomason, G. A.	Clarke
Pollard, W. R.	Fulton	Turner, C. F.	Whitfield
Powers, H. C.	Chatham	Vickers, J. H.	Bibb
Pritchett, R. G.	Fulton	Wallace, S. S., Jr.	Fulton
Pruitt, F. O.	Upton	Ward, C. M.	Wayne
Puckhaber, F. H.	S. Carolina	Warner, S.	Tennessee
Pye, J. C.	Upton	Weaver, J. A.	Florida
Rainey, R. W.	Putnam	Weiss, R. G.	Fulton
Ramey, G. W., Jr.	Fulton	Wellington, W. S.	Louisiana
Reece, W. R.	Floyd	Wells, W. S.	Walton
Reese, W. M.	Randolph	Wheeler, M. L.	Greene
Roberts, M. L.	Emanuel	White, C. H.	Fulton
Robinson, J. M.	Macon	White, D. H.	Fulton
Rodgers, R. M.	Sumter	Whitner, J.	Fulton
Rodriguez, B., Jr.	Mexico	Whittenberg, J. W.	DeKalb
Rosser, S. P.	Fulton	Wilkins, B. H., Jr.	Tennessee
Rowland, G. W.	Burke	Williams, F. B.	Troup
Russell, J. C.	Arkansas	Williams, G. R.	Fulton
Rutherford, W. A.	Tennessee	Willingham, P. B.	Stephens
Rylander, A., Jr.	Sumter	Wilson, C. B.	Jackson
Sanford, D. B.	Baldwin	Wilson, M. P.	Fulton
Savage, C. E.	Tennessee	Wimberly, M. S.	Clayton
Saye, J. F.	Telfair	*Woods, R. W.	Fulton
Schenck, J. W.	N. Carolina	Wright, A. P.	Thomas
Schofield, C. H.	Bibb	Young, R. H.	Bartow
Seanor, P. B.	Ben Hill		

## Co-operatives.

Filber, B. M.	DeKalb	McMurry, C. A.	Tennessee
Frankum, J. B.	Franklin	Morgan, A. B.	Arkansas
Kaplan, B. W.	Fulton	Ryder, E. A.	Muscogee

## Students 1917-18

## Freshman Class.

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Abreu, D.	S. America	Cater, P. F.	Monroe
Ackley, F. R.	Fulton	Cates, E. C.	Fulton
Adair, P.	DeKalb	Cherry, C. W.	Virginia
Aiken, I. M.	Glynn	Childs, J. W.	Bibb
Almond, J. H.	Rockdale	Clark, C. J., Jr.	Sumter
Almond, E. P.	Elbert	Clifton, W. L., Jr.	Florida
Anderson, A. S., Jr.	Wilkes	Cole, H. G.	Cobb
Anderson, P. H.	S. Carolina	Cole, I. M.	Coweta
Ansley, E. P., Jr.	Fulton	Cole, J. H.	Fulton
Armstrong, R. H.	Fulton	Cordes, A. W., Jr.	Chatham
Arnold, J. Y.	Elbert	Cramer, S.	Carroll
Asbury, F. L., Jr.	Habersham	Crocker, F. L.	Alabama
Atteberry, J. G.	Louisiana	Curry, W. H.	Mitchell
Atteberry, W.	Louisiana	Daniel, H. N.	Evans
Awtrey, B. S.	Cobb	Darden, G. L.	Troup
Bailey, H. R.	Butts	Darling, C. L.	Ware
Baker, J. S.	Troup	Davis, V. L.	Jackson
Baker, P. W.	Kentucky	DeFreitas, J. M. R.	S. America
Barnett, K. D.	Jackson	*DesPortes, C. J.	Muscogee
Barry, A. F., Jr.	Fulton	Dickens, G. F.	Hancock
Baskin, J. P.	Carroll	Dickey, C. E.	Tennessee
Bell, E.	New Jersey	Doyal, R. L.	Fulton
Bell, H. I.	Fulton	Dunaway, C. E., Jr.	Sumter
Bell, R. P.	Virginia	Duncan, J. R.	Dooley
Berry, W. F.	Arkansas	Duncan, L. P.	Houston
Bleckley, S. C.	Habersham	Dunwody, R. G.	Fulton
Boggs, C. A.	Fulton	Dyal, J. O., Jr.	Camden
Booker, A. J.	Troup	Earnest, J. D.	Tennessee
Boone, C. H.	Coweta	Edwards, J. T., Jr.	Fayette
Bottorff, H. R.	Arkansas	Edwards, S. B.	Clarke
Brock, H. B.	Alabama	Egerton, W. A.	N. Carolina
Brooks, W. P., Jr.	Chatham	Eggleston, D.	Fulton
Bryan, J. E.	Butts	Eubanks, G. F., Jr.	Fulton
Buchanan, G. E., Jr.	Sumter	Ewing, L. D.	Gwinnett
Buckner, C. J.	Decatur	Finch, J. E.	N. Carolina
Burkhart, W. H.	Ben Hill	Fortson, L. G.	Muscogee
*Burnham, H. M.	Chatham	Fox, M. P.	Terrell
Burns, W. C.	Florida	Franklin, C. R.	Newton
Burrus, R. C.	Alabama	Garlington, T. R.	Floyd
Callaway, S. P.	Wilkes	Geer, W. W.	Douglas
Campbell, C. R.	Louisiana	Godbee, B. W.	Toombs
Campbell, W. W.	Houston	Gordon, M. O.	Gordon
Carmack, C. D.	Alabama	Gordon, W. H.	Spalding
Carmack, W. L.	Alabama	Gracey, J. C.	Tennessee
Carnes, E. M.	Cobb	Greene, M. C.	DeKalb
Carson, C. C.	Jackson	Grobli, W. G.	Fulton
Carter, Jas. H.	Newton	Haley, J. H.	S. Carolina
Carvalho, R. de S.	S. America	Hall, J. L.	Thomas
Cary, C. W.	Hancock	Hammett, A. M.	Clayton
Cate, H. C.	Texas	Hardin, G. D.	Tennessee



## Georgia School of Technology

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Harlan, J. W., Jr.	Fulton	*Keating, J. M.	Chatham
Harris, S. H.	Carroll	Keen, J. V.	Florida
Hartray, E. A.	Illinois	Kincaid, Geo.	Tennessee
Harty, A.	Chatham	King, A. B.	Dooly
Harvey, C. L.	Fulton	Kinnebrew, T.	Louisiana
Haskell, A. W., Jr.	Alabama	Kirby, M. L.	Troup
Hassell, F. L.	Brooks	Knapp, W. A.	Thomas
Hassler, F.	Whitfield	Knott, E. L.	Morgan
Hasson, C. B.	Cherokee	Kratzer, J. B.	Mississippi
Hasson, J. W.	Cherokee	Lassiter, W. O.	Burke
Hawes, A. L.	Elbert	Lee, C. R.	Arkansas
Hawkins, R. E. L.	Pike	Leeper, R. F.	Arkansas
Haynesworth, H. J., Jr.	S. Carolina	Leonard, A. L.	DeKalb
*Hays, C. S.	Bibb	Lilliott, R. B., Jr.	Telfair
Hemphill, W. A., Jr.	Fulton	Longrier, J. A.	Alabama
Herndon, W. H.	S. Carolina	Lowndes, R. I. O'n.	N. Carolina
Herring, T. F.	Dooly	Lynch, R. E.	Putnam
Higgins, T. F.	Tennessee	McAfee, R. E.	Texas
Higgins, W. F.	New Mexico	McAllister, H. L.	S. Carolina
Hill, A. R.	Newton	McBride, W. C., Jr.	Coweta
Hill, B. J.	Dougherty	McCall, B. B., Jr.	Laurens
Hill, W. J., Jr.	Sumter	McCleskey, J. M.	Cobb
Hill, W. S.	Mitchell	McCorkle, J.	Fulton
Hine, E. W.	Floyd	McCrorry, H. S.	Schley
Hite, H. H.	Kentucky	McCullough, J. L.	Montg'y.
Holcomb, B. M.	Fulton	*McCullough, J. W.	Arkansas
Hood, T.	Jackson	McDonald, J. H.	DeKalb
Hooker, S. D.	N. Carolina	McDonald, C. H.	Lowndes
Hooks, R. H.	Texas	McElroy, F.	Fulton
Hopkins, F. J.	Butts	MacKay, K.	Florida
*Hopkins, R. K.	Florida	Maddox, H. E., Jr.	DeKalb
Horine, J. W., Jr.	S. Carolina	Mallory, R. A., Jr.	Pike
Houser, R. P.	Houston	Maloney, P. H., Jr.	Fulton
Howard, O. T.	Muscogee	Manning, U. L.	Cobb
Howell, A. S., Jr.	Greene	Marsh, S. T.	S. Carolina
Hoxsey, J. M., Jr.	Fulton	Mauldin, H. W.	Franklin
Hubert, H. B.	Warren	Methvin, C. M.	Dodge
Hulsey, W. N.	Fulton	Moore, E. M.	Barrow
Hunt, E. E.	Penn.	Moore, H. C., Jr.	DeKalb
Hunt, R. E.	Tennessee	Moore, R. T.	Hancock
Hunt, W. W., Jr.	Muscogee	Morgan, W. E.	Sumter
Hutcheson, F. H.	Douglas	Morrison, W. C.	Tennessee
Hyer, B. W.	Fulton	Mullis, C. H.	Bleckley
Hyers, W. K.	Florida	Murphy, N. B.	Alabama
Ingram, J. W.	Coweta	Newman, L.	Henry
Jacobs, H. L.	Barron	Nicolas, A. R.	Chatham
Jennings, R. J.	Troup	Nuckolls, T. J.	Muscogee
Jervis, J. R.	Floyd	O'Connor, B. J.	Montg'y.
Johnson, J. M.	Sumter	Ortiz, S. F.	S. America
Jones, E. G.	Habersham	Park, H. H.	Fulton
Jones, J. B.	Fulton	Parker, F. H.	S. Carolina
Jones, M.	Fulton	Parsons, W. N., Jr.	Pulaski

## Students 1917-18

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Peabody, T. F.	Fulton	Tennent, T. H.	Fulton
Perdue, A. R.	Fulton	Thomas, E. F.	Mississippi
Pharr, E. R.	Gwinnett	Thompson, R. W.	Newton
Potts, P. A.	Troup	Tolbert, G. V.	Texas
Powell, J. R.	Lowndes	Trawick, G. T.	Hancock
Prescott, T. S.	DeKalb	*Twitty, T. E.	Mitchell
Ravenel, T. C.	Fulton	Ulrich, R. H.	Illinois
Rees, J. F.	Schley	Upshaw, H. T.	Douglas
Reynolds, J. H. F.	Tennessee	Vandegrift, J. H.	Florida
*Rice, D. D.	Tennessee	Viener, R., Jr.	Mississippi
Robinson, A. G., Jr.	Thomas	Wadsworth, H. E.	Fulton
Rosolio, L.	Thomas	Waldrop, J. E.	Clayton
Sammons, R. B.	Putnam	*Walker, J. W.	Fulton
Schley, H. M.	Chatham	Watkins, E. G.	Tennessee
Schlosburg, L. H.	S. Carolina	Watkins, R. F.	DeKalb
Scott, K. L.	Fulton	Watson, R. O.	Randolph
Scott, R. H.	Fulton	Webb, B. P.	Sumter
Settle, J. V.	Barrow	Wells, J. B.	Oklahoma
Shaver, T. W.	Tennessee	Weston, C. W.	Mississippi
Shivers, W. H.	Hancock	Weston, T. P., Jr.	Fulton
Simpson, M. M.	Haralson	Wheelock, F. H.	Tennessee
Sims, M. M.	Wilkes	Whelchel, C. C., Jr.	Madison
Singleton, E. H.	Wilkinson	Whelchel, D.	Turner
Smedley, M. E.	Fulton	Whiteley, W. R.	Warren
Smith, Burt	Elbert	Wilcox, H. T.	Elbert
Smith, C. B.	Barrow	Wilder, J. B.	Bibb
Smith, L. H.	Alabama	Wilkinson, F. S.	Coweta
Smith, T. W., Jr.	Muscogee	Willingham, A., Jr.	Tennessee
Souton, A. C.	Mexico	Willingham, R. T.	Cobb
Spears, L. B.	Cherokee	Wilson, B. F.	Gwinnett
Spengler, A. D.	Mississippi	Wilson, D. H.	Florida
Spivey, J. G.	Putnam	Wilson, J. G.	Glynn
Stephens, W. N.	Cobb	Wise, J. D.	Mississippi
*Stokes, H. G.	Texas	Wooten, J. M., Jr.	Shellman
Stubbs, R. C.	Texas	Wynne, W. K.	Wilkes
Summerlin, C. C.	Washington	Yates, T. A.	Walker
Tate, L. W.	Arkansas	Yorke, F. R.	N. Carolina
Taylor, E. L.	Pike	Young, C. C.	N. Carolina
Taylor, W. J.	Mississippi	Young, C. E., Jr.	Florida
Teasley, J. R.	Cherokee	Zelmenovitz, C.	Glynn

## Co-operatives.

Abernathy, W. L.	Tennessee	Herbig, H. F.	Fulton
Anderson, J. E.	Tennessee	Khoury, M. A.	Dodge
Blate, M.	Dougherty	King, W. A.	Meriwether
Bryan, E. W.	Mississippi	Knighton, J. H.	Randolph
Byerly, M. F.	Muscogee	McDuffie, R. E.	S. Carolina
Dorman, H. P.	Alabama	Phillips, D. W.	Florida
Dotson, A. Q.	N. Carolina	Scruggs, R. E.	Brooks
Fleming, J. T.	Richmond	Self, T. C.	Virginia
Greene, A. D.	Thomas	Simpson, S. S.	Fulton

# Georgia School of Technology

NAME	COUNTY OR STATE	NAME	COUNTY OR STATE
Smith, J. B. -----	N. Carolina	Veltman, C. S. -----	Tennessee
Stakely, W. N. -----	Alabama	Wallis, L. D. -----	Sumter
Stanley, E. L. -----	Fulton		

## Special Architecture.

*Armsby, C. L. -----	Florida	Chase, T. E. -----	Barrow
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## Special Textile.

Blount, C. A. -----	Burke	Murphey, A. H. -----	Coweta
DesVerger, D. S. -----	Decatur	Parsons, E. D. -----	Tennessee
Heath, B. D., Jr. -----	N. Carolina	Pitts, W. I. H. -----	Harris
Jackson, L. C. -----	Newton	Ragan, C. -----	N. Carolina
McLellan, A. -----	Louisiana	Rudicil, R. K. -----	Walker
McMillan, B. L. -----	Cobb	Thweatt, W. F. -----	Fulton

## Specials.

Cole, S. G. -----	Coweta	Sandiford, L. B. -----	Newton
Gignilliat, L. R. -----	Indiana	Tu, M. L. -----	China
Henderson, D. G. -----	Alabama	Whittaker, A. D. -----	Fulton
Miller, J. H. -----	Fulton	Young, T. S. -----	China
Puder, J. W. -----	Chatham		

## NIGHT SCHOOL OF COMMERCE.

### Senior Class.

Beattie, Geo. A.	Daniell, Hal. S.	Romm, Mendel
Clyatt, J. M.	Englett, Raymond	Tu, M. L.
Collins, C. R.	Faust, C. E.	Welch, J. W.

### Junior Class.

Bass, R. C.	Grobli, W. G.	Patillo, L. B.
Brenner, C. P.	Hoffman, R. E.	Rogers, L. L.
Carmichael, D. L.	Henderson, A. B.	Russel, J. C.
Dunn, L. G.	Howard, J. P.	Swann, James P.
Evans, Ira C.	Mathes, W. C.	Setze, J. W., Jr.
Fraser, James M.	Moore, N. A.	Siegel, M.
Faust, G. H.	Mc. White	Welch, L. A.
Gordon, C. H.	Phillips, J. H.	

### Freshman Class.

Albert, M. Albea	Beavers, R. W.	Brooks, Sudie
Allman, O. R.	Binford, H. A.	Bruce, Jas. C.
Baker, Edna	Bowers, Hamilton	Burwell, J. H.
Baker, Mabel	Boatwright, Jas. K.	Bailey, Florence
Barron, Jean	Broach, C. E.	Cameron, Jno. S., Jr.

# Students 1917-18

Clowers, W. T.	Jones, Conner T.	Pitts, Mamie L.
Copeland, Ellie	Jordon, Harold W.	Pringleau, Theo.
Connally, Hugh O.	Joines, Robert E.	Quinn, W. D.
Cox, Julien L.	Jordon, C. W., Jr.	Ritter, Clement
Crider, Harry J.	Jennings, M. G.	Rogers, L. L.
Cohen, Ruben	Kane, H. A.	Rooke, Mary M.
Cheek, B. L.	Kreis, E. A.	Rooke, Lalla
Chapman, G. H.	Kreis, Fritz J.	Seals, Thos. D.
Denk, August, Jr.	King, Geo. O.	Shealy, M. L.
Denton, Alice B.	Longino, T. M.	Starouck, Jno. E.
Denny, Franklin E.	Loeb, H.	Sawtell, Annie E.
Duggan, Sam	Mauldin, F. R.	Setze, J. A.
Durden, D. T.	Matson, Erie	Singleton, J. J.
Dodge, W. A.	Mathews, W. B., Jr.	Solloway, Morris
Dues, H. V.	Mellen, George F.	Sorrows, Alma H.
Eberhardt, Gussie	Melton, G. E.	Spears, S. C.
Estes, M. F.	Morgan, W. C.	Sullivan, J. L.
Fields, L. B.	Murphy, W. C.	Sater, S. L.
Felder, Cora	Malone, Kate	Thrower, Robert K.
Frances, J. S., Jr.	Morrow, Fred R.	Thomas, Caroline
Gee, R. L.	Meek, Harry	Traweck, R. B.
Giddish, Mildred	McClain, Norma W.	Thornton, Douglas
Gunkel, F. C.	McCarthy, J. J.	Tenenbaum, A. B.
Hagan, H. T.	McGaughey, A. D.	Tidwell, W. P.
Hall, J. A.	McIntosh, W. E.	Vinson, Lovenah
Hall, Ruby	McLean, H. G.	Vickers, J. F.
Harrell, J. M.	McDonald, G. S.	Wallace, C. A.
Harris, W. H., Jr.	Nagle, Mary	Webb, G. C.
Harrison, C. C.	Nelson, Jno. L.	Wing, Ruth C.
Hoffman, W. G.	Nuling, E. D.	Williams, Milton E.
Henderson, T. B.	Neal, Joseph	Wittels, Lewis
Hill, F. U.	Napier, Mrs. G. H.	Witcher, Pauline
Holt, Margaret	Paden, Dean S.	Wright, Donald S.
Hunnicut, Corrie	Patterson, Wm. M.	Williams, Flance, Mrs.
Henderson, Guy	Parks, Lena May	Wood, Elizabeth
Huey, J. W.	Peacock, R. H.	Watson, S., Jr.
Jenks, J. D.	Penland, Marion	Wise, Annie T.
		Young, Bessie M.

## Summary of Registration.

Senior Class -----	93	Night School -----	334
Junior Class -----	127	Summer School -----	112
Sophomore Class -----	229		
Freshman Class -----	310		
Special Architects -----	3		1391
Special T. E. -----	16		
School of Commerce -----	158	Deduct names counted twice	100
Special Unclassified -----	9		
Total -----	945	Net enrollment -----	1291



### Occupation or Profession of Parents or Guardians of Regular Students.

Merchants	149	Real Estate	14
Farmers	106	Railway Agents	27
Manufacturers	34	Cotton Merchants	12
Workmen	8	Contractors	17
Salesmen	21	Ministers	16
Physicians	26	Teachers	10
Engineers and Architects	41	Accountants	5
State and City Officers	20	Dentists	10
Insurance Agents	25	Miscellaneous	205
Bankers	19		
Lawyers	22	Total	787

### Graduates by Departments

Graduates in Mechanical Engineering	359
Graduates in Electrical Engineering	304
Graduates in Textile Engineering	101
Graduates in Civil Engineering	88
Graduates in Engineering Chemistry	36
Graduates in Chemistry	11
Graduates in Architecture	35
Graduates in Commerce	15
Total	943

### Graduates in Business as Follows:

Government War Service	321
Mechanical Engineering	180
Electrical Engineering	170
Textile Engineering	65
Civil Engineering	60
Engineering Chemistry and Chemistry	16
Architecture	17
Merchandise and Real Estate	15
Sales Agencies	29
Teachers	27
Physicians	5
Farmers	8
Ministers	3
Advanced Students in other Institutions	7
Deceased	20
Total	943

The Mechanical Engineering Degree was established when the School began in 1888; the Degree in Electrical and Civil Engineering in 1896; the Degree in Textile Engineering in 1898; the Degree in \*Mining Engineering, Chemical Engineering and Chemistry in 1906; the degrees in Architecture in 1908; and the Degree in Commerce in 1914.

\*N. B. Mining Engineering discontinued for the present.

## GENERAL INFORMATION.

### Historical Sketch

On November 24, 1882, Hon. N. E. Harris, of Macon, afterwards Governor of the State, prepared and introduced in the Georgia Legislature a resolution authorizing the creation of a committee to investigate the advisability of establishing a technical school in Georgia. The committee of ten, appointed, visited the leading engineering institutions of the North, and in the summer session of the Legislature of 1883, presented a report recommending the establishment of such an institution, accompanied with a bill for that purpose. The measure was overwhelmingly defeated, receiving only sixty-five votes. The people of the State were appealed to; it was the issue in many counties in the election of members to the next Legislature; the State Agricultural Society and other prominent State organizations pressed the matter upon the attention of the people, and finally, in 1885, fathered by Governor Harris, a bill was passed appropriating \$65,000 to found the school.

Early in January, 1886, Governor McDaniel appointed the first Commission, consisting of Messrs. N. E. Harris, of Bibb; S. M. Inman, of Fulton; O. S. Porter, of Newton; E. R. Hodgson, of Clarke, and Columbus Heard, of Greene. This Commission organized by electing Governor Harris chairman, which position he has occupied from that time to the present. Mr. E. R. Hodgson was made secretary, which position he occupied to the time of his resignation, in 1912; and Mr. S. M. Inman was elected treasurer, and held this position until he resigned on account of his removal from the State, in 1897, at which time he was succeeded by Mr. J. S. Akers, who holds the office at the present time.

By Act of the Legislature, December 9, 1890, two other trustees were added to the Local Board, and on January 7, 1891, Messrs. D. N. Speer and W. B. Miles were duly elected. Mr. D. N. Speer resigned in 1893, and was succeeded by Mr. George Winship, of Atlanta. Mr. S. M.

Inman resigned October, 1897, and was succeeded by Mr. George W. Parrott, of Atlanta, who served until June, 1899, and was in turn succeeded by Mr. Walter M. Kelly, of Atlanta. Due to removal from the city, Mr. Kelly resigned March, 1907, and was succeeded by Mr. N. P. Pratt, of Atlanta, who was elected July, 1907. In April, 1911, Col. O. S. Porter resigned, and was succeeded by Mr. Hal G. Nowell, of Monroe, Ga. October 4, 1912, Mr. E. R. Hodgson resigned, and was succeeded by his son, Mr. E. R. Hodgson, Jr., on the same date. Judge Columbus Heard died October 23, 1912, and was succeeded by Mr. George J. Baldwin, of Savannah, who was elected January 10, 1913. Mr. George Winship resigned October 14, 1914, and was succeeded by Mr. J. S. Akers, who was elected on the same date. Mr. W. B. Miles died March 18, 1918, and was succeeded by Mr. John W. Grant, who was elected April 3, 1918.

By Act of the Legislature, August 5, 1910, the Chairman of the Board of Trustees of the University of Georgia was authorized to appoint biennially not exceeding three members of his Board, to act, ex-officio, as members of the Board of Trustees of each of the branch colleges of the University. In accordance with the provisions of this Act, the following three members of the University Board were duly appointed ex-officio members of the Local Board of Trustees of the Georgia School of Technology: Judge G. F. Gober, Marietta, Ga.; Mr. J. T. Newton, Madison, Ga., and Mr. W. E. Simmons, Lawrenceville, Ga. In September, 1912, Hon. Clark Howell, of Atlanta, was appointed trustee, vice Hon. J. T. Newton. In 1916, Mr. H. J. Rowe, of Athens, Ga., was appointed, vice Mr. Howell.

The Act establishing a technical school in Georgia provided for competitive bids from various sections of the State for the location of the school. The cities of Athens, Atlanta, Macon, Milledgeville and Penfield submitted such bids. That of Atlanta was accepted, this action based upon the following superior inducements offered by Atlanta: \$50,000 in cash donated by the city; \$2,500 annuity for twenty years; a citizens' subscription of \$20,000, headed by Mr. S. M. Inman with a donation of \$5,000. A campus of nearly five acres was purchased on North Avenue from the Peters Park Company. The Commission having decided that the campus was too small for the purposes of the school, Mr. Richard Peters, president of the Company, do-

nated four additional adjoining acres. During the summer of 1888, the buildings and part of the equipment being ready, a faculty and president were elected, and on October 7, the institution was turned over by the Local Commission to the Trustees of the University. The Georgia School of Technology was formally opened.

Dr. Isaac S. Hopkins had been called to serve as first president of the new institution, and occupied this position until 1896. These eight years of beginnings were difficult ones. There was no general understanding or appreciation of the significance of technical education. As a consequence, the school made small progress. During the early morning of April 21, 1891, the school shops were totally destroyed by fire. With the insurance, supplemented by an additional appropriation from the Legislature, the loss was replaced by a building and equipment much superior to the original plant.

During the spring of 1896, Doctor Lyman Hall, a graduate of West Point, and then Professor of Mathematics at the Georgia School of Technology, was elected to succeed Dr. Hopkins, first as chairman of the faculty, and, in June, as president of the institution. The presidency of Dr. Hall, extending from this date until his death, August 16, 1905, was a period of steady expansion. In December, 1896, the Legislature appropriated \$20,000; of this amount, \$5,000 was for the equipment of a Department of Electrical Science, and \$15,000 for building a dormitory. The Knowles Dormitory was duly erected, and was first occupied by students at the opening of the fall session of 1897. The Local Board of Trustees, at its meeting in December, 1896, established the Degrees of Electrical Engineering and Civil Engineering.

In December, 1897, the Legislature appropriated \$10,000 for the establishment of a Textile Department, provided that the friends of the school contribute \$10,000 additional in money and machinery. During the year 1898 nearly \$20,000 worth of machinery and about \$13,500 in cash were donated to the school for this purpose. Experienced mill architects were employed to make plans for a Textile building; and, in the fall of 1899, a regular course in Textiles, leading to the Degree of Bachelor of Science in Textile Engineering, was opened to students. The successful creating of this Textile course was largely due to the friendly interest of Mr. Aaron French, of Pittsburgh,



Pa. He became interested in the school during the summer of 1897, and co-operated liberally in enabling the school to meet the conditions imposed by the Legislature in making its appropriation for the course in Textiles. His first donation, of \$2,600, was given without condition. A second gift, of \$3,000, was made, provided other friends of the school raise an equivalent amount; the city of Atlanta promptly met this condition by appropriating the necessary \$3,000 in July, 1898. During the same year Mr. French made a third gift to the Textile Department amounting to \$3,000. Besides these donations toward textile engineering, Mr. French showed his warm friendship for the school by gifts for maintenance, in June, 1899, of \$3,000, and in January, 1900, of \$3,500, and of three self-perpetuating scholarships of \$500 each, in July, 1898; December, 1899, and in 1901, respectively. In commemoration of his generosity, the Textile Department is known as the A. French Textile School.

The creating of the Departments of Electrical, Civil, and Textile Engineering was the beginning of an era of rapid and steady expansion—in buildings and equipment, in size of faculty and student body, in curriculum and standard of work, and in prestige; the Legislature, also, began gradually to become aware of the needs of the school and of its value as an upbuilding power in the industrial life of the State.

In December, 1900, the Legislature appropriated \$10,000 for an Electrical building and \$6,000 for additional textile equipment, with the proviso that these amounts should not be available until the friends of the school should furnish \$25,000 in cash donations, a condition that was promptly met. In June, 1902, the General Educational Board offered to give the school \$5,000 for equipment and \$2,500 two successive years for maintenance, provided friends of the school would donate \$10,000 additional. These friends responded by giving \$12,910 in cash, as listed in the 1903-4 catalogue. In 1903, the will of Mr. James Swann provided that the school should receive \$10,000 in cash upon the settlement of his estate. This amount, properly supplemented, was spent in the purchase of nearly two acres of land adjoining the campus and in the erection on a portion thereof of a president's residence. Mr. Swann had previously in 1900, given the school \$21,500 for the erection of the Janie Swann Dormitory, a memorial to his wife.

The next considerable addition to the school plant was the Lyman Hall Laboratory of Chemistry. In June, 1904, the Legislature appropriated \$10,000 for the erection of a chemical laboratory, provided friends of the school would give an equal amount. The conditional amount was raised by the mid-summer of 1905, and in October of the following year the building, completed and fully equipped, was occupied by the Department of Chemistry. Dr. Hall had been enabled to meet the provision of the Legislature only with heroic sacrifice and at enormous cost to his health; the amount was completed only a few weeks before his death. It was in connection with memorial exercises in his honor that the corner-stone of the Laboratory was laid with imposing ceremony November 25, 1905. It is eminently fitting that his name is perpetuated in the structure. Dr. Hall's connection with the Georgia School of Technology was in every way a notable one. During the nine years of his presidency, he succeeded, largely through his own efficiency and devotion, in raising the school from an insignificant and struggling existence to a position of proud equality with the great engineering institutions of the country.

As successor to Dr. Hall, the Board of Trustees elected Dr. K. G. Matheson, professor of English at the Georgia School of Technology, to the chairmanship of the faculty and installed him as president the following year, 1906. The period since this date has been characterized by an even greater growth. Not merely has the school experienced a remarkable enlargement in its material equipment and its patronage, but its name has yearly become more widely and more favorably known, and its resources have been applied continually toward a more extensive satisfying of the needs of its State and its community.

Meanwhile, the Legislature had shown a desire to meet the growing needs of the institution. The first appropriation, made December 26, 1888, was \$18,000. The second appropriation, made December 26, 1890, was \$22,500. The maintenance fund was continued at this rate until 1898, when it was cut \$2,500, making \$20,000, while \$10,000 was added for two years for the maintenance of the Textile Department, making \$30,000 per annum in all. In 1896, the Legislature had made an appropriation of \$10,000 for dormitories for each of the two following years. In 1900, the appropriation for maintenance was raised to \$40,000;

in 1902, to \$45,000; in 1906, to \$55,000; in 1907, to \$60,000; in 1909, to \$70,000; in 1911, to \$75,000; in 1912, to \$80,000; in 1913, to \$90,000; and in 1915, to \$100,000. The city of Atlanta has shown a like increasing interest in the needs of the school by increasing the annual appropriations for the general maintenance fund and for the Night School.

The Class of 1903 was the first to erect a memorial to itself on the campus. A beautiful marble drinking fountain was placed on the campus in March, 1911, and was formally presented to the institution at the following commencement. On the same occasion, the Electrical Seniors of the Class of 1911 presented the school with handsome electric light standards, placed in front of the entrance of the Electrical Building. The Electrical Seniors of the Class of 1912 continued the tradition created by their immediate predecessors by erecting memorial electric light standards in front of the entrance of the Library. The classes of 1914 and 1915 erected the handsome light standards and concrete steps in front of the main building.

Considerable additions of land have also been made to the eleven acres that the school possessed in 1905. In August, 1906, the Legislature appropriated \$17,500 for the purpose of enlarging the campus. Four acres east of the present campus and fronting on North Avenue were purchased for \$16,000, and the remaining \$1,500, increased by friends to \$3,500, was invested in a lot fronting 180 feet on Cherry street and 150 feet on Kimball street. Purchase has also been made of a lot fronting 156 feet on North Avenue and 150 feet on Fowler Street, and of two additional lots on Cherry street. In December, 1911, the school purchased from the Peters Land Company nearly three acres of land adjoining the northern limits of the campus. With characteristic generosity, the Peters Land Company presented to the school an intervening street, 50 feet wide and 500 feet long. The latest addition to the school property, January 29, 1913, is about four acres of land north of and adjoining the present athletic field. The County Commissioners of Fulton County agreed to grade both fields; and the work, now completed, represents an outlay of approximately \$30,000, had it been let to private contract. In April, 1913, Mr. John W. Grant, of Atlanta, gave \$15,000 for the equipment of the field, and the Board of Trustees, in appreciation of the gift, named the field "The Hugh Inman Grant Field," in memory of Mr. Grant's

deceased son. This dual athletic field is unequalled in the South. In 1915, through the further liberality of Mr. Grant and the Board of Trustees, the concrete grand stand was completed at an additional cost of \$20,000, making it the largest and most modern of its kind in the South.

The most important additions to the school equipment, however, have been the several handsome buildings that have been added to the plant since 1905.

On March 12, 1906, Mr. Andrew Carnegie donated \$20,000 for a Library building, on condition that the school appropriate a minimum of \$2,000 annually for the support of the Library. The Board of Trustees accepted the condition, and the building was secured.

In November, 1909, through the initiative of the Women's Federation of Clubs, Mrs. Joseph B. Whitehead gave \$5,000 towards the erection of a Hospital, to be called the Joseph Brown Whitehead Memorial Hospital, in memory of her husband. This donation was increased by various gifts in cash and materials; and the Hospital, costing about \$15,000, was erected during the summer of 1910 and the succeeding session.

In February, 1910, Mr. John D. Rockefeller gave \$50,000 toward the erection of a Y. M. C. A. building, provided the school would raise \$25,000. This pro rata was secured; and the erection of the building was begun in May, 1911, and was completed in the summer of 1912.

In August, 1910, the Legislature appropriated \$35,000 to be applied toward the erection of a new Shop building, on condition that friends of the school raise \$15,000. Through the agency of the Atlanta Chamber of Commerce, considerably more than this amount—\$22,000 in all—was subscribed in November, 1910; the fund was secured in February, 1911, and the erection of the building was begun. Ultimately the building will consist of five units, three of which are now completed and occupied.

On probating the will of the late Mr. Julius L. Brown, who died September 4, 1910, it was found that he had left two-thirds of his valuable estate to the Georgia School of Technology. The school has come into possession of its proportionate share of the estate, and according to the terms of the will, the income from the property will be



## Georgia School of Technology

used to equip and maintain the Departments of Chemistry and Electrical Engineering.

One of the most important movements in the history of the school was inaugurated in the Greater Tech Campaign in the summer of 1914. Prior to this time certain large manufacturers of machinery had been induced, through the efforts of friends of the school, to donate \$100,000 worth of power machinery, conditioned on the erection by the school of a suitable building. As a result of the campaign, the Greater Tech Fund was raised, largely by the subscriptions of business men of Atlanta, and the new Power Station building is completed, and the machinery is being installed.

This building is the beginning of a plan to establish complete equipment for all kinds of engineering research work in the school, and it will open unlimited opportunities for the graduates of the school in original and scientific investigation as well as in the regular field of engineering work.

One of the most significant illustrations of the growth of the school appears in the record of yearly attendance. Keeping pace with the advance in Legislative favor and in material equipment, the school shows a steady increase in the number of the student body. Nor have there been merely numerical additions; the character of the attendance has improved year by year, the class standing has risen, the curriculum has been broadened and elevated, and the finished product has increased in number.

The following list, showing the number of students registered at the school from the opening of the school to the close of session of 1917-18, furnishes an interesting record of these facts:

1888-89----- 130	1894-95----- 125	1900-01----- 463
1889-90----- 145	1895-96----- 154	1901-02----- 431
1890-91----- 169	1896-97----- 180	1902-03----- 483
1891-92----- 205	1897-98----- 267	1903-04----- 510
1892-93----- 138	1898-99----- 332	1904-05----- 511
1893-94----- 121	1899-1900---- 459	1905-06----- 501
		1906-07----- 562
908	1,517	3,461

## General Information

	Regular Students	School of Com.	Night School	Summer School	Dupli- cate	Total
1907-08----	562	--	135	---	---	697
1908-09----	565	--	72	44	31	650
1909-10----	593	--	153	54	45	755
1910-11----	667	--	94	141	84	818
1911-12----	689	--	154	105	90	858
1912-13----	660	--	132	113	100	805
1913-14----	712	44	243	142	139	1,002
1914-15----	724	86	181	110	95	1,006
1915-16----	724	--	380	100	87	1,117
1916-17----	843	--	273	106	93	1,129
1917-18----	945	--	334	112	100	1,291
Total -----						10,128

From this it will be seen that a total of 16,014 young men, estimated by yearly enrollment, have enjoyed the benefits of the institution. While many of these did not graduate, in almost every instance these young men will be found engaged in industrial pursuits, using the lessons which they learned at the school, putting into operation in their work the skill derived from contact with the great machines forming part of the equipment of the institution, and adding to the industrial values of the State and of the nation wherever they are found.

## Purpose

The chief aim and purpose of the Georgia School of Technology is to give to its students such a combination of general, scientific, and professional training as will fit them for lives of higher usefulness and success, especially as engineers, in the industrial development of the State of Georgia and of the South.

## Degrees Conferred

The degrees conferred are as follows: Bachelor of Science in Mechanical Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Textile Engineering, Bachelor of Science in Engineering Chemistry, Bachelor of Science in Chemistry, Bachelor of Science in Architecture, and Bachelor of Science in Commerce, Bachelor of Commercial Science, and Bachelor of Science in Industrial Education.

## Buildings

The School occupies a desirable site in a campus of some twenty-five acres, lying at the junction of North Avenue and Cherry Streets, easily accessible by street-car lines on Marietta, West Peachtree and Luckie Streets. The Academic building is a handsome edifice of brick, trimmed with granite and terra-cotta and roofed with slate. It has one hundred and thirty feet front, is one hundred and twenty feet deep, and four stories above the basement story. It contains ample accommodations in halls, offices, apparatus-rooms, recitation and lecture-rooms.

The workshops are also of brick, the main shop building being two hundred and fifty feet long by eighty wide, and two stories, with large basements. It is designed with reference to its use, and affords space for the machine and wood-shops. The smith-shop and foundry, are located in new shop building which has recently been erected, and which ranks among the best in the country in appearance, utility and equipment.

The Textile building was completed in 1898, and is 150 by 70 feet, with three floors for the accommodation of machinery, class rooms, etc. It was designed by Lockwood, Greene & Co., of Boston, and fulfills every requirement of a modern cotton mill.

The Dormitory buildings consist of the Janie Austell Swann Dormitory, containing fifty rooms for students; the Knowles Dormitory, containing thirty-six rooms for students, gymnasium, shower-baths, and dining room; and two smaller dormitories of eight rooms each.

The Electrical building is three stories in height, 90 by 82 feet in plan, and contains the Experimental Laboratory, the Electrical Laboratory, Drawing-rooms, Blue-print room, and class-room.

The Lyman Hall Laboratory of Chemistry is two stories in height, with basement. Each floor has an approximate area of 5,600 square feet. The lecture-rooms, stock-rooms, library, offices, gas analysis laboratory, photographic and spectroscopy rooms occupy the front, and the laboratories the rear wing.

The beautiful new Carnegie Library building has been fully equipped with the most modern library appliances. The building is constructed of pressed brick with ornate limestone trimmings, and is a model of beauty and con-

venience. In the basement are binding, storage and janitor's rooms, with assembly and club-rooms to be completed later. The first story contains the handsome reading-rooms, librarian's office, stack and seminar rooms. The building is seventy-five and one-half feet front by fifty-eight feet deep.

The new Joseph Brown Whitehead Memorial Hospital, erected during the summer of 1910 and the following session, is a completely equipped modern hospital, devoted to the needs of the student body. It is erected on the east side of Cherry Street, and covers approximately 4,000 square feet, with a capacity of twenty-seven patients. On the first floor is the office and private laboratory of the School Physician, a room for minor surgical operations, sterilizing room, suite of three rooms for the resident nurse, a kitchen, besides a ward to accommodate ten beds, with necessary service and clothes rooms, diet kitchen and solarium. Private rooms for seven patients are located on the second floor, where are also a nurse's room, ward for ten beds, solarium and service room. The building is constructed of brick and marble, is heated with steam from the central heating plant of the School, and is equipped with a special system of ventilation.

## Young Men's Christian Association Building

In 1910 Mr. John D. Rockefeller made a very generous proposition to all colleges of the South, in which he agreed to give to any institution, under specified conditions, two dollars for every one it would raise locally for the erection of a Y. M. C. A. Building. The Georgia School of Technology was among the very first to take advantage of this offer. The sum of \$25,000.00 was raised among the friends of the School in the City of Atlanta and parts of the State, and immediately Mr. Rockefeller added \$50,000.00 to it. The School appropriated a most desirable lot, and now we have one of the handsomest student buildings in the country.

Everything that makes for the betterment of the man physically, socially, mentally and spiritually, and everything that can add to the pleasure and comfort of the student has found, as far as practicable, a home in the building. It contains a large and comfortably furnished lobby and reading rooms, offices for the Secretary and assistants, auditorium, rooms for various clubs and socie-



ties, athletic headquarters, 12 dormitory rooms, game room, grill room, barber shop, student post office, bowling alleys, locker room, and shower baths.

### **New Power Station and Engineering Laboratory General Description.**

The new Power Station building is completed, a part of the equipment installed, and the remainder will be installed as fast as funds become available. The value of this Station and equipment including the accompanying campus improvement will be about \$300,000. It has been made possible through the generous co-operation of both Northern and Southern manufacturers, the alumni, our students, and friends of the School in Georgia. Considered both from a practical and an educational standpoint, it will give to the Georgia School of Technology advantages which are enjoyed by few institutions anywhere.

This plant will supply the entire school with light, power, heat, refrigeration, compressed air, and high-pressure water service for fire and laboratory purposes. It will supply the engineering laboratories and shops with alternating and direct current, both high and low tension; steam, high and low pressure, both saturated and superheated. The Station and equipment have been designed not only for practical use, but also as a power and research laboratory, and for the purpose of instruction in engineering. The new plant will not only provide many new facilities for instruction and research, but will also materially expand the usefulness and opportunities of all the other departments in the school.

As the Power Plant is designed along the lines of modern central station practice, the School will be unusually well equipped for training engineers who will be thoroughly fitted to undertake large power and industrial plant problems, using steam, oil, gas, or hydro-electric power. The large amount of undeveloped water power in the South, and our vast resources in coal, oil, and natural gas, make it vitally important that engineers receive thorough instruction in a power laboratory of this kind. Students entering Tech will receive their finishing work in engineering in this new Power Laboratory, and it will also afford excellent opportunities for post-graduate work and original investigations by the faculty and students.

### **Equipment of the New Station.**

The major portion of the power equipment has been selected, and consists of the most modern power plant machinery, combining also many features for research and instruction purposes. An appropriation of \$30,000 was made by the State Legislature at its last session, for the installation of this machinery, and a considerable part of it has already been placed in the building.

### **New Research Bureau**

The erection of the new Power Laboratory marks the beginning of a new era in the history of the School. It makes possible the establishing of a State Research Bureau at Georgia Tech which has long been needed in the manufacturing and industrial development of Georgia. Not only the new Power Laboratory equipment, but the major portion of the facilities of the School, will in various ways become available for industrial research and testing. This new system will be developed as rapidly as funds become available, and by means of a general State Campaign. By suitable publicity, the manufacturers, engineers and officials throughout the State will be kept informed of this progressive work. The special aim of the Research Bureau will be to afford opportunities for the study and development of the natural resources of Georgia together with by-products, new processes and machinery. Plans are being prepared for the new Research Building.

### **Bureau of Standards**

It is proposed in connection with the new Power Laboratory and Research Bureau to establish a Bureau of Standards for the benefit of the Government of the State and also that of cities, towns and counties. All materials relating to sanitation, sewerage, ventilation, heating, highways, paving materials, chemicals, machinery and other supplies and equipment used by the above mentioned Government may be purchased and used according to well established standards, and as fast as new materials and equipment are developed, their true value can be ascertained by means of this State Bureau of Standards. This Department will also have represented in it various United States Government Standards.

### Equipment of Laboratories and Shops

The Mechanical, Electrical, Chemical, Experimental and Physical laboratories have been fitted up with reference to practical work, and such additions will be made from time to time as may be required for experimental research. The apparatus and appliances are of the newest and best forms, and will be increased as occasion may demand.

The workshops have been equipped with machinery and tools from the best makers, and of the latest pattern, at a cost of over fifty thousand dollars. In pursuance of the fundamental idea of giving the student access to the best machinery, and experimental knowledge of the best methods of mechanical work, the Trustees have put the Mechanical Department on a footing with the most improved and complete shops in the country, and scarcely any process requiring fine material and accurate workmanship is beyond its capacity.

The Textile building has an unsurpassed equipment of cotton manufacturing machinery, listed elsewhere.

Valuable additions have recently been made to the equipment of the Departments of Architecture, Electrical Engineering, Experimental Engineering and Physics.

## DEPARTMENTS

### DEPARTMENT OF ARCHITECTURE

PROFESSORS SMITH AND GAILEY, AND MR. TUCKER.

#### General Statement

The Course in Architecture was opened to the students in the autumn of 1908 as one of the full professional courses in the Georgia School of Technology. The regular course extends over four years, leading to the degree of Bachelor of Science in Architecture.

It is the purpose of the Department to offer the necessary training in Design, Construction, and the allied subjects that will eventually fit the student for the practice of Architecture, and will also enable him upon graduation to be of immediate value as a draughtsman.

With this end in view, the course of study combines with the strictly professional work, the essentials of a liberal education, aiming to give the student as broad a foundation as possible for his future work. The number and scope of the subjects to be covered during the course make it necessary that the student start his architectural work at the beginning of the Freshman year.

Architecture is regarded primarily as a Fine Art and the aesthetic side of the profession is emphasized throughout the course. Design, consequently, with the subjects closely allied to it, is given the most important place in the curriculum.

The work in Design is started after the courses in Descriptive Geometry, Shades and Shadows, Perspective and the Elements of Architecture have given the student a good foundation. During the Sophomore year simple problems in Design are taken, involving the use of the Orders and other elements and training in the sense of correct form and proportion. In the Junior and Senior years plan problems are given and the entire composition of building is



## Georgia School of Technology

studied. A series of lectures on the Elements and Theory of Architecture accompanies this work and frequent sketch problems are given to develop rapidity of thought and presentation. During the second term of the Senior year, Thesis Designs are presented, the subjects for which are selected by the students with the approval of the head of the Department.

Whenever possible, the problems given out by the Society of Beaux Arts Architects are taken. These designs are judged in New York in competition with the work of other Schools of Architecture through the country. Problems that are not sent to New York for judgment are passed upon by a jury of practicing architects in Atlanta, and "Mentions" are awarded to the best designs.

In the study of the History of Architecture, the student is encouraged to regard the buildings not merely as remarkable monuments of great artistic value, but also as links in the chain of architectural development, and as being truly representative of the civilization and epoch to which they belong. The social and political aspects of the various periods and their effects upon the historic styles are studied, as well as the architectural characteristics of the building.

Draughtsmanship receives constant attention throughout the four years, not only in the courses in pure Drawing and Water Color, but also in the work in Design and Ornament. The importance of the study of Drawing can scarcely be over-estimated, it being the architect's principal medium of expression.

The nature and use of Building Materials are studied, as well as the principles involved in General Construction and Sanitation, while the studies of Graphic Statics and Structural Mechanics familiarize the student with these branches of Architectural Engineering. Inspection trips are made to buildings in course of erection and to certain manufacturing plants.

Throughout the work the student is urged to make adequate and intelligent use of the Library, a comprehensive knowledge of the best work of all periods being essential to success.

## Equipment

The Department of Architecture occupies the entire third floor of the new Engineering Building, there being two

## Department of Architecture

large Draughting Rooms, a Free Hand Studio, Lecture Room, Office, etc. All of these rooms are well furnished and have excellent light, both natural and artificial.

The School possesses a good working Library of Architectural books and periodicals, to which additions are constantly being made, as well as collections of photographs, drawings, stereopticon slides and plaster casts.

## Scholarship

The Georgia Chapter of the American Institute of Architects has established a self-perpetuating scholarship open to students in the two upper classes who may be in need of financial assistance. The beneficiary refunds the money after graduation in payments of small monthly notes without interest.

## Two-Year Special Course

A Special Course of two years' duration is also offered to qualified men, who must have had at least one year's experience in the office of a practicing architect. In addition to this, fourteen units are required for entrance. Exceptions to this may be made by the head of the department with approval of the faculty in the cases of mature candidates who have had at least two year's experience in the office of a practicing architect. In this course Architectural studies only are pursued. Upon completion of the required work a Certificate of Proficiency is given.

## The Regular Course in Architecture

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Hrs. Per Wk		
		Class	Lab'y	Equv.
Arch. 1	Architectural Drawing		6	6.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Draw. 2a	Descriptive Geometry Recitation	3		7.5
Draw. 4a	Descriptive Geometry Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3c	Wood Shop		3	3.
Mil. 1	Military Instruction		3	3.
Total..		15	17	53.

## Georgia School of Technology

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 7a	Elements of Architecture	1	8	7
Arch. 3a	Shades and Shadows	1	6	11
Arch. 8	Pencil Drawing	3	2	7
Chem. 2	Inorganic Chemistry	3	2	2
Chem. 6	Chemical Laboratory	3	2	7.5
Eng. 12	Rhetoric	3	2	2
Eng. 16	Theme Writing	1		7.5
Math. 18	Analytic Geometry	5		1
Mil. 2	Military Instruction		3	12.5
Total..		14	21	53.5

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 5	Perspective	1	3	4
Arch. 11	Architectural Design	2	12	14
Arch. 15	History of Architecture, Ancient	2	1	5
Arch. 19	Charcoal Drawing	3	2	2
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading	2		5
Math. 21	Analytic Geometry	3		7.5
Math. 25	Calculus	3		7.5
Phys. 5	Physics	3		7.5
Mil. 3	Military Instruction		3	3
Total..		14	21	55.5

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 12	Architectural Design	2	12	16
Arch. 16	History of Architecture, Mediaeval	2	1	5
Arch. 20	Charcoal Drawing	3	2	2
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading	5		12.5
Math. 28	Calculus	3		7.5
Phys. 6	Physics	3		7.5
Mil. 4	Military Instruction		3	3
Total..		13	18	53.5

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 23	Architectural Design	2	14	14
Arch. 27	History of Architecture, Modern	1	1	5
Arch. 31	Building Construction, Masonry	1	1	3.5
Arch. 35	Sanitation of Buildings	1		2.5
Arch. 39	Cast Drawing	2	2	2
Arch. 43	Pen and Ink Drawing	2	2	2
C. E. 13	Graphic Statics	3	3	8
Eng. 31	English Literature	3		7.5
Eng. 35	Literary Thesis	3		7.5
M. L. 7	French	3		7.5
Mil. 5	Military Instruction		3	3
Total..		12	26	55

## Department of Architecture

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 24	Architectural Design	1	16	18
Arch. 32	Building Construction, Masonry	1	1	3.5
Arch. 40	Cast Drawing	2	2	2
Arch. 44	Pen and Ink Drawing	2	2	2
Arch. 48	Historic Ornament	4	4	4
Arch. 52	Water Color Drawing	3	3	3
Eng. 32	English Literature	3		7.5
Eng. 36	Literary Thesis	2		5
Ex. E. 11a	Structural Mechanics	3		7.5
M. L. 8	French	3		7.5
Mil. 6	Military Instruction		3	3
Total..		9	31	55.5

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 55	Architectural Design	1	18	22
Arch. 59	Archaeology	1	4	5
Arch. 63	Building Construction, Carpentry	1	1	3.5
Arch. 67	Professional Practice	1		2.5
Arch. 71	History of Art	1		2.5
Arch. 75	Antique Drawing	2	2	2
Arch. 79	Pen and Pencil Rendering	2	2	2
Arch. 83	Water Color Drawing	3	3	3
Arch. 87	Business Administration	1		2
Com. 71	French	3		7.5
M. L. 9	French	3		7.5
Mil. 7	Military Instruction		3	3
Total..		7	33	55

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 56	Architectural Design	1	20	28
Arch. 64	Building Construction, Carpentry	1	1	3.5
Arch. 68	Professional Practice	1		2.5
Arch. 72	History of Art	1		2.5
Arch. 76	Antique Drawing	2	2	2
Arch. 80	Pen and Pencil Rendering	2	2	2
Arch. 84	Water Color Rendering	3	3	3
Com. 72	Commercial Law	1		2
M. L. 10	French	3		7.5
Mil. 8	Military Instruction		3	3
Total..		7	31	56

## Special Course in Architecture

## FIRST YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 3	Shades and Shadows	1	6	7
Arch. 7	Elements of Architecture	1	8	9
Arch. 11	Architectural Design	2	6	10
Arch. 15	History of Architecture, Ancient	2	2	5
Arch. 19	Charcoal Drawing	1		2
Arch. 31	Building Construction, Masonry	1		3.5
Arch. 35	Sanitation of Buildings	1		2.5
Arch. 43	Pen and Ink Drawing	2	2	2
Mil. 1	Military Instruction		3	3
Total..		6	27	44



## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 5a	Perspective	1	3	4.
Arch. 12	Architectural Design		16	25.
Arch. 20	History of Architecture, Mediaeval	2		5.
Arch. 32	Charcoal Drawing		2	2.
Arch. 39a	Building Construction, Masonry	1		3.5
Arch. 44	Cast Drawing		2	2.
Arch. 52	Pen and Ink Drawing		2	2.
Mil. 2	Water Color Drawing		3	3.
	Military Instruction		3	3.
Total..		4	31	49.5

## SECOND YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Arch. 23	Architectural Design		14	17.
Arch. 27	History of Architecture, Modern	2		5.
Arch. 40	Cast Drawing		2	2.
Arch. 59	Archaeology		4	5.
Arch. 63	Building Construction, Carpentry	1		3.5
Arch. 67	Professional Practice	1		2.5
Arch. 71	History of Art	1		2.5
Arch. 79	Pen and Pencil Rendering		2	2.
Arch. 83	Water Color Drawing		3	3.
C. E. 13	Graphic Statics	2	3	8.
Com. 71	Business Administration	1		2.
Mil. 3	Military Instruction		3	3.
Total..		8	31	55.5

## Second Term

Arch. 24	Architectural Design		16	25.
Arch. 48	Historic Ornament		4	4.
Arch. 64	Building Construction, Carpentry	1		3.5
Arch. 68	Professional Practice	1		2.5
Arch. 72	History of Art	1		2.5
Arch. 75a	Antique Drawing		2	2.
Arch. 76	Antique Drawing		2	2.
Arch. 80	Pen and Pencil Rendering		2	2.
Arch. 84	Water Color Rendering		3	3.
Com. 72	Com. Law.	1		2.
Mil. 4	Military Instruction		3	3.
Total..		4	32	51.5

## Courses of Instruction

## Arch. 1. Architectural Drawing.

Mr. Tucker.

Freshman, first term, six hours.

An introductory course in free-hand and mechanical lettering, instrumental drawing of architectural forms, and India ink wash-drawing.

## Arch. 3 and 3a. Shades and Shadows.

Professor Gailey and Mr. Tucker.

Arch. 3, First Year Special, first term, seven hours.

Arch. 3a, Freshman, second term, seven hours.

This course consists of lectures and draughting room work in the theory and methods of determining the shades and shadows on architectural forms.

Text: *McGoodwin*, "Architectural Shades and Shadows."

## Arch. 5 and 5a. Perspective.

Professor Gailey.

Arch. 5. Sophomore, first term, 4 hours.

Arch. 5a. First Year Special, second term, 4 hours.

This course consists of lectures and draughting room work in the theory of Perspective, the use of Vanishing Points, the Perspective Plan method, etc.

Text: *Lubschez*, "Perspective."

## Arch. 7 and 7a. Elements of Architecture.

Professor Smith and Mr. Tucker.

Arch. 7. First Year Special, first term, nine hours.

Arch. 7a. Freshman, second term, nine hours.

Illustrated lectures on the simple elements of Architectural Design, such as walls, doors, cornices and mouldings. This is followed by a careful consideration of the classical orders and the principles involved in their use. Stress is laid on their character and general proportions rather than upon mathematical rules for drawing them. Carefully rendered drawings of the orders and other simple Elements of Design are made in the draughting room.

Text: *Ware*; "American-Vignola." Part I.

## Arch. 8. Pencil Drawing.

Prof. Gailey.

Freshman, second term, two hours.

Elementary work in free-hand pencil drawing from blocks and simple forms, studying the mass and proportions.

**Arch. 11. Architectural Design.**

*Professor Smith.*

Prerequisites, Arch. 3, 5 and 7.

Sophomore, first term, twelve hours.

First Year Special, first term, six hours.

Simple problems in composition and design involving the Orders, are studied, especial attention being given to the design and drawing of details at a large scale. Individual criticism is given as the work progresses, and at the completion of the problems, the rendered drawings are judged by a jury of practicing architects.

**Arch. 12. Architectural Design.**

*Professor Smith.*

Prerequisite, Arch 11.

Sophomore, second term, twelve hours.

First Year Special, second term, sixteen hours.

A continuation of Arch. 11.

**Arch. 15. History of Architecture, Ancient.**

*Professor Smith.*

Prerequisite, Arch. 7.

Sophomore and First Year Special, first term, two hours.

Two lectures a week are given with the aid of the stereopticon. Architectural development is studied from the dawn of civilization to the fall of Rome. Research work is done in the Library by each student and written quizzes are held.

Text: *Statham*; "Short Critical History of Architecture."

**Arch. 16. History of Architecture, Mediaeval.**

*Professor Smith.*

Prerequisite, Arch. 15.

Sophomore and First Year Special, second term, two hours.

A continuation of Arch. 15, in which the various mediaeval styles of European architecture are studied. Individual reports are prepared by the students on special topics.

Text: *Statham*; "Short Critical History of Architecture."

**Arch. 19. Charcoal Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 8.

Sophomore and First Year Special, first term, two hours.

Charcoal work from simple plaster casts. Monthly tests without criticism are given.

**Arch. 20. Charcoal Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 19.

Sophomore and First Year Special, second term, two hours.

A continuation of Arch. 19.

**Arch. 22. Elementary Design.**

*Mr. Tucker.*

Prerequisites, Drawing 2a and 4a.

Junior, C. E., second term, three hours.

An elementary course in the classical Orders and their application to Doorways, small Power Houses, etc.

**Arch. 23. Architectural Design.**

*Professor Gailey.*

Prerequisite, Arch. 12.

Junior and Second Year Special, first term, fourteen hours.

This course succeeds Arch. 12. Problems in planning are taken up and buildings are designed in plan, section and elevation. Carefully rendered drawings are made, and short sketch problems are given at stated periods.

**Arch. 24. Architectural Design.**

*Professor Gailey.*

Prerequisite, Arch. 23.

Junior and second year special, second term, sixteen hours.

A continuation of Arch. 23.



**Arch. 27. History of Architecture, Modern.**

*Professor Smith.*

Prerequisite, Arch. 16.

Junior and second year special, first term, two hours.  
This concluding course in the subject is devoted to a consideration of Renaissance and Modern Architecture, beginning with the work of Brunelleschi.  
Text: *Statham*; "Short Critical History of Architecture."

**Arch. 31. Building Construction. Masonry.**

*Professor Gailey.*

Junior and First Year Special, first term, one hour.  
Recitations and quizzes in the materials and processes of masonry construction as applied to buildings. Foundations, footings, brick work, stone masonry, systems of reinforced concrete, etc., are studied.  
Text: *Kidder*; "Building Construction and Superintendence, Masonry."

**Arch. 32. Building Construction. Masonry.**

*Professor Smith.*

Prerequisite, Arch. 31.

Junior and First Year Special, second term, one hour.  
A continuation of Arch. 31.

**Arch. 35. Sanitation of Buildings.**

*Professor Smith.*

Prerequisite, Arch. 12.

Junior and Second Year Special, first term, one hour.  
A study of the principles of Heating, Ventilating and Plumbing. Lectures and recitations.  
Text: *Allen*, "Notes on Heating and Ventilating."

**Arch. 39 and 39a. Cast Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 20.

Junior, First Term and First Year Special, second term, two hours.

Drawing from casts of architectural features and sculpture.

**Arch. 40. Cast Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 39.

Junior and Second Year Special, second term, two hours. A continuation of Arch. 39.

**Arch. 43. Pen and Ink Drawing.**

*Professor Smith.*

Prerequisite, Arch. 20.

Junior and First Year Special, first term, two hours.  
The drawing and rendering in pen and ink of architectural subjects. Stress is laid upon the composition of the sketch as well as its presentation. Drawings by recognized masters are studied and copied to familiarize the student with good technique and style.  
Text: *Maginnis*; "Pen Drawing."

**Arch. 44. Pen and Ink Drawing.**

*Professor Smith.*

Prerequisite, Arch. 43.

Junior and First Year Special, second term, two hours.  
A continuation of Arch 43, in which the student works from photographs.

**Arch. 48. Historic Ornament.**

*Professor Gailey.*

Prerequisite, Arch. 39.

Junior and Second Year Special, second term, four hours.

A course in the design of Architectural ornament in various historic styles. The best examples from the period are studied and used as inspiration for the work.

**Arch. 52. Water Color Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 39.

Junior and First Year Special, second term, three hours.

Wash drawings in Sepia are made from still-life models.

**Arch. 55. Architectural Design.**

*Professor Smith.*

Prerequisite, Arch. 24.

Senior, first term, eighteen hours.

In the Senior Year, the designing of larger compositions is begun. Group plans are studied and more complicated problems are taken up.

**Arch. 56. Architectural Design.**

*Professor Smith.*

Prerequisite, Arch. 55.

Senior, second term, twenty hours.

A continuation of Arch. 55. During the latter part of the term the Thesis designs for the Bachelor's degree are made. Programs requiring original work must be selected.

**Arch. 59. Archaeology.**

*Professor Smith.*

Prerequisite, Arch. 24 and 27.

Senior and Second Year Special, first term, four hours.

One or more Design problems in some of the more important historic styles are given. This course offers opportunity to obtain more exact knowledge of certain styles, and supplements the work in Architectural History, upon which it is largely dependent.

**Arch. 63. Building Construction. Carpentry.**

*Professor Gailey.*

Senior and Second Year Special, first term, one hour.

Recitations and quizzes on Carpentry Construction as applied to buildings. The construction of the frame house, floors, partitions, roofs, interior finish, etc., are studied.

Text: *Kidder*, "Building Construction and Superintendence, Carpentry."

**Arch. 64. Building Construction. Carpentry.**

*Professor Smith.*

Prerequisite, Arch. 63.

Senior and Second Year Special, second term, one hour.

A continuation of Arch. 63.

**Arch. 67. Professional Practice.**

*Professor Smith.*

Senior and Second Year Special, first term, one hour.

A course of lectures and discussions on professional ethics, competitions, contracts, specifications, theory of design and the specific requirements of certain classes of buildings such as School Houses, Libraries, Hospitals, and Residences. Papers are prepared and read by the students and discussed in class.

**Arch. 68. Professional Practice.**

*Professor Smith.*

Prerequisites, Arch. 67.

Senior and Second Term Special, second term, one hour.

A continuation of Arch. 67.

**Arch. 71. History of Art.**

*Professor Gailey.*

Prerequisite, Arch. 16.

Senior and Second Year Special, first term, one hour.

Recognizing the often intimate connection of Architecture with the allied Arts of Sculpture and Painting, the history of these subjects is taken up briefly in a course of lectures and recitations, assisted by the stereopticon and by photographs. Egyptian, Assyrian, Greek and Roman work is studied.

**Arch. 72. History of Art.**

*Professor Gailey.*

Prerequisite, Arch. 71.

Senior and Second Year Special, second term, one hour.

A continuation of Arch. 71, devoting especial attention to the sculpture and painting of the Italian Renaissance.

**Arch. 75 and 75a. Antique Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 40.

Arch. 75. Senior, first term, two hours.

Arch. 75a. Second Year Special, second term, two hours.

Drawing from the cast of antique sculpture and the full length figure.



**Arch. 76. Antique Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 75.

Senior and Second Year Special, second term, two hours.

A continuation of Arch. 75, including also drawing from life.

**Arch. 79. Pen and Pencil Rendering.**

*Professor Smith.*

Prerequisite, Arch. 44.

Senior and Second Year Special, second term, two hours.

A continuation of Arch. 44, in which sketches are made from nature and more elaborate renderings are made.

Text: *Hays*; "Architectural Rendering in Pen and Ink."

**Arch. 80. Pen and Pencil Rendering.**

*Professor Smith.*

Prerequisite, Arch. 79.

Senior and Second Year Special, second term, two hours.

A continuation of Arch. 79.

**Arch. 83. Water Color Drawing.**

*Professor Gailey.*

Prerequisite, Arch. 52.

Senior and Second Year Special, first term, three hours.

Water Color drawings and sketches are made from photographs, still-life objects, architectural details, and nature.

**Arch. 84. Water Color Rendering.**

*Professor Gailey.*

Prerequisite, Arch. 83.

Senior and Second Year Special, second term, three hours.

A continuation of Arch. 83, in which the rendering of Architectural Perspectives in water color, is studied.

**DEPARTMENT OF CHEMISTRY**

PROFESSORS EMERSON, BOGGS, AND DANIEL, DR. WROTH,  
MR. WALLER AND MR. GAVEY.

**General Statement**

The courses offered by this department are intended, in the first place, to give the student a broad foundation in General and Theoretical Chemistry, so that new problems met in his future work may be solved intelligently; and, in the second place, to give him special training in those branches of Chemistry which have been most generally applied industrially, so that he may be immediately useful.

Two courses leading to degrees are offered; one to the degree Bachelor of Science in Engineering Chemistry, the other to the degree Bachelor of Science in Chemistry.

**Equipment**

The Lyman Hall Laboratory of Chemistry, thus named in honor of Dr. Lyman Hall, second President of the institution, was completed in 1906. It is a T-shaped building of brick, with limestone trimmings, two stories high, with a basement. Each floor has an approximate area of 5,600 square feet. Lecture rooms, reading room, stock rooms, offices, combustion room, and dark rooms occupy the front, and laboratories the rear wing. The basement is fitted up for offices, lecture rooms and laboratories, used at present by the Department of Geology and Metallurgy. The large lecture room on the first floor will accommodate about one hundred students, and there are two smaller rooms for the use of advanced classes. Especial care has been given to the lighting and ventilation of the laboratories. All of them receive light from three sides, and, for the removal of noxious fumes, they are amply provided with hoods, each of which has a separate flue leading to a tight wooden fume-box, located just under the roof. This box communicates with the outer air. The natural draught thus created serves the desired purpose admirably.

Each student is provided with gas, water, sink, and a

# Georgia School of Technology

private locker allowing at least four feet of desk space. The entire first floor of the rear wing is occupied by the laboratory for elementary Chemistry, which will accommodate 350 students. The upper floor of this wing is for the laboratories of qualitative and quantitative analysis, and a small private laboratory for the instructors. Sixty students can be accommodated in the first named and thirty in the second. The hydrogen sulphide gas used is generated in a separate room. The students are served with materials and apparatus from a stock-room on each floor. The amply lighted balance room, which is shut off from the laboratory fumes by means of double doors, is equipped with seven high-grade balances, one of which is mounted on a pier of masonry free from contact with the building, thus eliminating vibrations. On this floor is located a reading room provided with some of the leading journals and reference works devoted to Chemistry.

## Course Leading to the Degree Bachelor of Science in Chemistry

This course is designed to meet the demand for skilled chemists, who are not necessarily engineers. It differs from the other course by the omission of engineering subjects and the substitution therefor of Mineralogy, Crystallography and Geology. Also, the time devoted to chemical subjects is somewhat greater. It is expected that this course of study will equip the student with a more thorough and comprehensive knowledge of Chemistry.

## Tabulation of Subjects Leading to the Degree Bachelor of Science in Chemistry

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3c	Wood Shop		3	3.
M. E. 5	Smithy		3	3.
M. E. 7	Foundry		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

# Department of Chemistry

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Eng. 18	Analytic Geometry	5		12.5
Math. 11a	Machine Shop		6	6.
Mil. 2	Military Instruction		3	3.
Total..		15	14	50.

## SOPHOMORE YEAR

### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 13	Qualitative Analysis	1	9	10.5
Dr. 13	Machine Drawing		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Readings			
Geol. 1	Ferrous Metallurgy	2		5.
Math. 21	Analytic Geometry	2		5.
Math. 25	Calculus	3		7.5
Phys. 9	Physics	4		10.
Mil. 3	Military Instruction		3	3.
Total..		15	15	51.5

### Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 14	Qualitative Analysis	1	3	4.5
Chem. 16	Quantitative Analysis	2	9	12.
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Readings			
Math. 23	Calculus	5		12.5
Phys. 10	Physics	4		10.
Phys. 14	Physics Laboratory		3	4.
Phys. 20	Slide Rule		5	5.
Mil. 4	Military Instruction		3	3.
Total..		15	18.5	54.

## JUNIOR YEAR

### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 17	Quantitative Analysis		9	9.
Chem. 21	Organic Chemistry	3		7.5
Chem. 23	Organic Laboratory		3	3.
Chem. 29	Advanced Inorganic Chemistry	2		5.
Chem. 37	Industrial Chemistry			
Eng. 31	English Literature	3		7.5
Eng. 35	Literary Thesis			
M. L. 1	German			
M. L. 7	French	3		7.5
M. L. 13	Spanish			
Phys. 11	Physics	3		7.5
Phys. 15	Physical Laboratory		3	4.
Mil. 5	Military Instruction		3	3.
Total..		14	18	54.

\*Given Alternate years.



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## Second Term

Abbrev.	Subject	Hrs. Per W'k		
Abbrev.		Class	Lab'y	Equv.
Chem. 18	Quantitative Analysis			
Chem. 22	Organic Chemistry	3	9	9.
Chem. 24	Organic Laboratory			7.5
Chem. 30	Advanced Inorganic Chemistry	2	3	5.
Chem. 38	Industrial Chemistry			5.
Eng. 32	English Literature	3		7.5
Eng. 36	English Thesis			
Geol. 5	Mineralogy	3	3	10.5
M. L. 2	German			
M. L. 8	French	3		7.5
M. L. 14	Spanish			
Mil. 6	Military Instruction		3	3.
Total..		14	18	53.

## SENIOR YEAR

### First Term

Abbrev.	Subject	Hrs. Per W'k		
Abbrev.		Class	Lab'y	Equv.
Chem. 19	Quantitative Analysis	2	15	20.
Chem. 33	Physical Chemistry	2		5.
Chem. 29	Advanced Inorganic Chemistry	2		5.
Chem. 37	Industrial Chemistry			
Com. 71	Business Administration	1		2.
C. E. 7	Sanitary Engineering	3		7.5
M. L. 3	German			
M. L. 9	French	3		6.
M. L. 15	Spanish			
Mil. 7	Military Instruction		3	3.
Total..		13	18	58.5

### Second Term

Abbrev.	Subject	Hrs. Per W'k		
Abbrev.		Class	Lab'y	Equv.
Chem. 34	Physical Chemistry	3		7.5
Chem. 36	Physico-Chemical Measurements		3	3.
Chem. 30	Advanced Inorganic Chemistry	2		5.
Chem. 38	Industrial Chemistry			
Chem. 42	Thesis		8	8.
Com. 72	Commercial Law	1		2.
C. E. 8	Sanitary Engineering		6	6.
Geol. 10	General Geology	3		7.5
M. L. 4	German			
M. L. 10	French	3		6.
M. L. 16	Spanish			
Mil. 8	Military Instruction		3	3.
Total..		12	20	48.

\*Given Alternate years.

## Course Leading to the Degree Bachelor of Science in Engineering Chemistry

The graduate in this course will be prepared to pursue the subject either on its manufacturing or analytical side. With respect to his fitness to take up the work in chemical manufacturing, the course offers exceptional opportunities. The work in Mechanical Engineering, embracing consider-

## Department of Chemistry

able shop and laboratory practice, elementary mechanics, and the steam engine, will enable him to understand machinery, superintend the running of it, and take charge of various mechanical operations. The course in Drawing will enable him to understand mechanical drawings and express his ideas by means of them. The course in Electricity will enable him to understand electrical appliances and to superintend industrial operations carried on by means of this power. His knowledge of Chemistry will equip him to determine the relative values of the raw materials offered by dealers, and to conduct intelligently operations based on chemical principles, detect imperfections in them and suggest improvements. The work of the course being mainly chemical, the graduate will be prepared to undertake analytical processes of almost any kind, and should be valuable in the laboratory in many ways.

## Tabulation of Subjects Leading to the Degree Bachelor of Science in Engineering Chemistry

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
Abbrev.		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3c	Wood Shop		3	3.
M. E. 5	Smithy		3	3.
M. E. 7	Foundry		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

#### Second Term

Abbrev.	Subject	Hrs. Per W'k		
Abbrev.		Class	Lab'y	Equv.
Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Math. 18	Analytic Geometry	5		12.5
M. E. 11a	Machine Shop		6	6.
Mil. 2	Military Instruction		3	3.
Total..		15	14	50.

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## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 13	Qualitative Analysis		9	10.5
Dr. 13	Machine Drawing		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			5.
Geol. 1	Ferrous Metallurgy	2		5.
Math. 21	Analytic Geometry	2		7.5
Math. 25	Calculus	3		10.
Phys. 9	Physics	4		3.
Mil. 3	Military Instruction		3	51.5
Total..		14	15	

## Second Term

Chem. 14	Qualitative Analysis		3	3.5
Chem. 16a	Quantitative Analysis	2	6	9.
Dr. 14	Machine Drawing		3	3.
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading			5.
Math. 28	Calculus	5		12.5
Phys. 10	Physics	4		10.
Phys. 14	Physical Laboratory		3	4.
Phys. 20	Slide Rule		.5	.5
Mil. 4	Military Instruction		3	3.
Total..		14	18.5	53.

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 17	Quantitative Analysis		9	9.
Chem. 21	Organic Chemistry	3		7.5
Chem. 23	Organic Laboratory		3	3.
Chem. 29	Advanced Inorganic Chemistry	2		5.
Chem. 37	Industrial Chemistry			7.5
Eng. 31	English Literature	3		
Eng. 35	Literary Thesis			
M. L. 1	German	3		7.5
M. L. 7	French			
M. L. 13	Spanish			
Phys. 11	Physics	3		7.5
Phys. 15	Physical Laboratory		3	4.
Mil. 5	Military Instruction		3	3.
Total..		14	18	54.

## Second Term

Chem. 18	Quantitative Analysis		9	9.
Chem. 22	Organic Chemistry	3		7.5
Chem. 24	Organic Laboratory		3	3.
Chem. 30	Advanced Inorganic Chemistry	2		5.
Chem. 38	Industrial Chemistry			7.5
Eng. 32	English Literature	3		
Eng. 36	Literary Thesis			
Exp. E. 11a	Structural Mechanics	2		5.
Exp. E. 76	Power Plants	2		5.
M. L. 2	German	3		7.5
M. L. 8	French			
M. L. 14	Spanish			
Mil. 6	Military Instruction		3	3.
Total..		15	15	52.5

\*Given alternate years.

## Department of Chemistry

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 19	Quantitative Analysis	2	12	17.
Chem. 29	Advanced Inorganic Chemistry	2		5.
Chem. 37	Industrial Chemistry			5.
Chem. 33	Physical Chemistry	2		2.
Chem. 71	Business Administration	1		7.5
Com. E. 1a	Analytic Mechanics	3		7.5
Exp. E. 77	Heat Engines and Thermodynamics	3		4.
Exp. E. 73	Elementary Steam Laboratory		3	
Exp. E. 3	German	3		6.
M. L. 3	French			
M. L. 9	Spanish			
M. L. 15	Military Instruction		3	3.
Mil. 7				
Total..		16	18	57.

## Second Term

Chem. 30	Advanced Inorganic Chemistry	2		5.
Chem. 38	Industrial Chemistry			3.
Chem. 34	Physical Chemistry	3		7.5
Chem. 36	Physico-Chemical Measurements		3	3.
Chem. 42	Thesis		8	8.
Com. 72	Commercial Law	1		2.
E. E. 2	Applied Electricity	2		5.
E. E. 3a	Electrical Engineering Laboratory		3	4.
Exp. E. 78	Advanced Heat Engines and Thermodynamics	2		5.
Exp. E. 74	Fuel and Gas Engine Laboratory		3	4.
M. L. 4	German	3		6.
M. L. 10	French			
M. L. 16	Spanish			
Mil. 8	Military Instruction		3	3.
Total..		13	20	52.5

\*Given Alternate years.

## Courses of Instruction

## Chem. 1. Elementary Inorganic Chemistry.

Professors Emerson, Boggs and Daniel, Dr. Wroth,  
Mr. Waller, and Mr. Gavey.

Freshman, first term, three hours.

This course is required of all Freshmen and is designed to acquaint the student with some of the principles of Chemistry, and also familiarize him with the sources, methods of preparation, properties and uses of a number of important commercial substances. In order to accomplish these ends, considerable time is spent in explanatory and experimental lectures, in which the significance of the theories is dwelt upon, and their applications in a practical way pointed out. Thus the harmony between theory and practice is established. The modern theories



of solution, and the "Mass Law," are emphasized. The solution of numerous numerical problems is required.

Text: *Cady's "General Chemistry."* The ground covered during this term includes the first sixteen chapters, with about a month of review.

**Chem. 2. Elementary Inorganic Chemistry.**

*Professors Emerson, Boggs and Daniel, Dr. Wroth, Mr. Waller, and Mr. Gavey.*

Prerequisite, Chem. 1.

Freshman, second term, three hours.

A continuation of Chem. 1, covering the remainder of text, with about a month of review.

**Chem. 5. Chemical Laboratory.**

*Professors Emerson, Boggs and Daniel, Dr. Wroth, Mr. Waller, and Mr. Gavey.*

Freshman, first term, one two-hour period.

The Experiment-Observation-Deduction Method is here applied as far as the time permits. The keeping of accurate records of observations is required, as upon these the students must draw, in answering the oral questions following each experiment. These quizzes insure an understanding of the subject and its connection with the instruction given in Chem. 1. While the ground covered is limited, the thoroughness attained by requiring every student to recite on each experiment has amply justified the adoption of this method.

Text: Selected exercises.

**Chem. 6. Chemical Laboratory.**

*Professors Emerson, Boggs and Daniel, Dr. Wroth, Mr. Waller, and Mr. Gavey.*

Prerequisite, Chem. 1 and 5.

Freshman, second term, one two-hour period.

A continuation of Chem. 5, with special attention to the metals.

**Chem. 9. Qualitative Analysis.**

*Professor Emerson and Dr. Wroth.*

Prerequisites, Chem. 1, 2, 5, 6.

Sophomore, first term, three hours laboratory, one hour lecture.

This course is required of students in Civil and Textile Engineering, and optional for three hours shop for students in Electrical and Mechanical Engineering. The course is similar to Chem. 13, and is conducted in a like manner. Groups 1 and 2 of the metals are completed during this term.

Text: A. A. Noyes' "Qualitative Analysis."

**Chem. 10. Qualitative Analysis.**

*Professor Emerson and Dr. Wroth.*

Prerequisites, Chem. 9.

Sophomore, second term, time same as Chem. 9.

A continuation of Chem. 9, completing the study of the metallic ions.

**Chem. 13. Qualitative Analysis.**

*Professor Boggs and Mr. Waller.*

Prerequisites, Chem. 1, 2, 5 and 6.

Sophomore, first term, nine hours laboratory; one hour lecture.

This course includes laboratory work, lectures and quizzes, and is required of all students specializing in Chemistry. The lectures deal with the "Mass Law," Complex ions, solubility product, and other theoretical matters bearing on the work, as well as the methods of procedure, and the precautions necessary to secure good results. Frequent quizzes are given upon these lectures and upon the laboratory work.

Text: A. A. Noyes' "Qualitative Analysis."

References: Such texts as *Treadwell, Böttger, and Talbot and Blanchard*. The work of this term includes the separation of the metallic elements. Enough mixtures of known and unknown composition are given to ground the students thoroughly in the methods used.

**Chem. 14. Qualitative Analysis.**

*Professor Boggs and Mr. Waller.*

Prerequisite, Chem. 13.

Sophomore, second term, three hours laboratory, one hour lecture.

This course is a continuation of Chem. 13, and is conducted in a similar manner. The reactions and identifications of the more common anions are studied, and a number of unknown mixtures and minerals are given for complete analysis.

**Chem. 16 and 16a. Quantitative Analysis.**

*Professor Daniel, and Mr. Gavey.*

Prerequisites, Chem. 13; Chem. 14, completed or parallel.

Chem. 16. Sophomore, second term, Chemists, nine hours laboratory; two hours lecture.

Chem. 16a. Sophomore, second term, Engineering Chemists, six hours laboratory; two hours lecture.

These courses are an introduction to the general methods of gravimetric analysis. The work consists chiefly in laboratory practice and includes a thorough drill in stoichiometry. Conferences and oral quizzes are given on each exercise, and supplement the laboratory work. Numerous references to the literature of the processes are assigned and recited on. The standard of accuracy is raised as the student becomes more proficient; duplicate analyses are required throughout, thus inducing the student to test his own work as to accuracy and reliability. The required work includes the following or its equivalent: the estimation of water and chlorine, in pure salts; sulphur in pyrite; and the complete analyses of limestone, brass and solder; and fat in cotton seed meal, and caffeine in tea.

Texts: *Mahin* and references.

**Chem. 17. Quantitative Analysis.**

*Professor Daniel.*

Prerequisites, Chem. 16.

Junior, first term, nine hours laboratory.

This course is a continuation of Chem. 16 and 16a. As in all other quantitative work, duplicate analyses are re-

quired. Conferences, quizzes and problems are continued. The required work includes the following or its equivalent: the calibration of a set of weights and several pieces of volumetric apparatus; the principles of chlorimetry and iodimetry and their practical applications; the determination of the oxidizing power of pyrolusite; volumetric estimation of iron in ores; the gravimetric estimation of manganese in ores or alloys; and the analysis of iron and steel.

Texts: *Mahin, Lord*, and references.

**Chem. 18 and 18a. Quantitative Analysis.**

*Professor Daniel and Mr. Gavey.*

Prerequisite, Chem. 17.

Chem. 18. Junior, second term, Chemists, nine hours.

Chem. 18a. Junior, second term, Engineering Chemists, nine hours.

These courses are continuation of Chem. 17, and are required of all students of Chemistry. The laboratory work includes the following or its equivalent: preparation and use of a half normal acid and base, and the analysis of fertilizer, coal, and a silicate.

**Chem. 19 and 19a. Quantitative Analysis.**

*Professor Daniel.*

Prerequisite, Chem. 18.

Chem. 19. Senior, first term, Chemists, fifteen hours laboratory, and two hours recitation.

Chem. 19a. Senior, first term, Engineering Chemists, twelve hours laboratory, and two hours recitation.

The first six weeks is given to the complete qualitative and quantitative analysis of an unknown sample.

Immediately after the completion of this analysis work on the Thesis is begun.

**Chem. 21. Organic Chemistry.**

*Dr. Wroth.*

Prerequisites, Chem. 1, 2, 5 and 6.

Parallel, Chem. 23.

Junior, first term, three hours.



The ground covered in this course includes the paraffin hydrocarbons and their derivatives, mixed compounds derived from paraffins, and the carbohydrates.

Text: *Cohen's "Theoretical Organic Chemistry."*

**Chem. 22. Organic Chemistry.**

*Dr. Wroth.*

Prerequisites, Chem. 21 and 23.

Parallel, Chem. 24.

Junior, second term, three hours.

It includes the mixed compounds containing nitrogen, phosphorus, arsenic and sulphur, the purine groups and the cyclic hydrocarbons and their derivatives.

Text: As for Chem. 21.

**Chem. 23. Organic Laboratory.**

*Dr. Wroth and Mr. Waller.*

Prerequisites, as for Chem. 21.

Junior, first term, three hours.

In this course the student becomes acquainted with the apparatus used in organic work, and with such operations as fractional distillation, saponification, steam distillation, and the determination of melting and boiling points. Twelve or fifteen typical substances, such as ether, chloroform and iodoform, are prepared.

Text: *Cohen's "Practical Organic Chemistry."*

**Chem. 24. Organic Laboratory.**

*Dr. Wroth and Mr. Waller.*

Prerequisites, Chem. 21 and 23.

Junior, second term, three hours.

This course is a continuation of Chem. 23. The student carries out such processes as nitration, sulphonation and diazotization, and prepares twelve or fifteen compounds of typical kinds.

Text: As for Chem. 23.

**Chem. 29 and 30. Advanced Inorganic Chemistry.**

*Professor Boggs.*

Prerequisites, Chem. 1, 2, 5 and 6.

Junior and Senior, first and second terms, alternate years, two hours.

Required of Chemists and Engineering Chemists. This course consists in systematic study of the metals and non-metals, based on Mendeleeff's classification, and includes the chemistry of some of the rarer elements. While the course is largely descriptive, considerable time is devoted to modern theories.

Text: *Alexander Smith's Introduction to Inorganic Chemistry.*

**Chem. 33. Physical Chemistry.**

*Dr. Wroth.*

Prerequisites, Chem. 1, 2, 5, 6, and Phys. 9, 10, 11.

Senior, first term, two hours.

This subject is given to Seniors in both courses in Chemistry. It includes a study of the modern theories of structure of atom and molecule, the physical states of matter, and solution.

Text: *Senter's "Outlines of Physical Chemistry."*

**Chem. 34. Physical Chemistry.**

*Dr. Wroth.*

Prerequisite, Chem. 33.

Senior, second term, three hours.

A continuation of Chem. 33. Thermochemistry, Chemical Dynamics and Equilibrium, and Electrochemistry are the divisions studied. Some applications of physical chemical data to commercial problems, particularly those of Electrochemistry, are discussed in the latter part of the course.

Text: Same as for Chem. 33.

**Chem. 36. Physico-Chemical Measurements.**

*Dr. Wroth.*

Prerequisites, Chem. 33: Chem. 34, parallel.

Seniors, second term, three hours.

The student will determine molecular weights by the freezing and boiling point methods. Dissociation will be determined by the freezing point, boiling point and conductivity methods. Work in calibrating flasks will be done.

Text: *Jones*: "The Freezing Point, Boiling Point and Conductivity Methods."

**Chem. 37. Industrial Chemistry.**

Professor Daniel.

Prerequisites, Chem. 21, 22.

Junior and Senior, first term, alternate years, two hours.

Attention is given to the general operations common to many industries, such as crushing, grinding, lixiviation, filtration, evaporation, crystallization, and the details of the various types of apparatus for carrying on these processes. The most important manufacturing industries, such as the production of alkali, sulphuric acid, fertilizers, glass pigments, cement, oils, fats, soap, and glycerine, as well as paper and wood distillation are considered in detail. Weekly reports are submitted by members of the class reviewing journal articles pertaining to industrial chemical processes. Monthly and term papers are assigned to each student in which is discussed in some detail a particular process or the utilization of a special material.

Text: *Thorp*: "Outlines of Industrial Chemistry."

**Chem. 38. Industrial Chemistry.**

Professor Daniel.

Prerequisites, Chem. 21, 22, 37.

Junior and Senior, second term, alternate years, two hours.

This course is a continuation of Chem. 37. Other industrial processes are studied and discussed and the reports and papers are continued.

Text: *Thorp*: "Outlines of Industrial Chemistry."

**Chem. 42. Thesis.**

Prerequisites, all courses below the Senior year.

Senior, second term.

During the Senior year, the student prepares a thesis requiring original work. The subject for investigation is usually selected by one of the instructors in the department, who also supervises the work.

**DEPARTMENT OF CIVIL ENGINEERING**

PROFESSOR BRANCH, PROFESSOR KNEALE, MR. VIERHELLER,  
AND MR. STUBBS.

**General Statement**

The instruction in the Department of Civil Engineering is by recitation, lecture, drawing room and laboratory work, and field practice, made to conform as nearly as possible to the general routine of work in current engineering practice and still remain general in its scope.

The young graduate in Civil Engineering should have a broad education based upon Mathematics, Mechanics, Chemistry and Physics, the fundamental sciences of Engineering. He is expected to be expert only to the extent that he be a good surveyor, a neat draftsman and an accurate and systematic computer. These are the agencies through which his knowledge of the sciences is applied, and his success in any one of the specialties of the profession will depend largely upon his ability to make this practical application.

His general training should be such as to enable him to express his thoughts clearly and forcibly in good, concise English. The study of English is continued through the first three years, and a two-year course in one modern language is required. From the beginning the student is taught thoroughness in all office, laboratory, and field work; and, placed in the proper atmosphere, he is led by recitations, lectures and the use of current engineering literature to discriminate between methods, while the importance of efficiency and results is held constantly before his mind.

The course is so outlined as to fit the student to be of immediate value in practically all of the subordinate positions of the profession and to bring him to a point where



he may be able to continue his studies professionally and develop in any particular field which he may choose. Special attention is given to Railroad Engineering and the design of structures in steel and concrete.

The demand of recent years for better highways has broadened the field of Municipal or Highway Engineer until it has assumed such proportions that the Highway Engineer has become a paramount public official, with a broad experience in business methods and a thorough training in Civil Engineering. His knowledge of modern road materials must be certain, necessitating a special preparation in Geology, Mineralogy and Chemistry. The Highway Engineering subjects are given special attention, and ample study of modern methods of highway construction and maintenance is provided for throughout the Junior and Senior years.

There is a great demand on the part of cities for men trained in the handling of water and sewerage purification plants, as well as general municipal work. The preservation of the health of communities is constantly calling for more intense specialization in that branch of civil engineering known as Sanitary Engineering, and to meet this need Georgia Tech has added a newly equipped laboratory for the study of purification methods and bacterial analyses in supplying communities with pure air and water and for disposing of municipal wastes.

### Special Highway Course

A three day's course in advanced highway engineering is given during the last week in January. This work is offered for the benefit of practicing engineers and special information will be sent on request.

### Equipment

The aim of the Department is to keep up the equipment to meet the needs of the classes, to add such instruments as are required, and to replace the worn-out models by newer ones, rather than to acquire a large and not fully needed equipment. This process has been worked out so completely that our instruments are all new and of the latest models.

## The Course in Civil Engineering

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chém. 1	Inorganic Chemistry	3		7.5
Chém. 5	Chemical Laboratory		2	2.
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing and Declamations	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3b	Wood Shop		3	3.
M. E. 5	Smithy		3	3.
M. E. 7	Foundry		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

#### Second Term

Chém. 2	Inorganic Chemistry	3		7.5
Chém. 6	Chemical Laboratory		2	2.
C. E. 1a	Plane Surveying	1	3	5.5
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing and Declamations	1		1.
Math. 18	Analytic Geometry	5		12.5
M. E. 12	Machine Shop		3	3.
Mil. 2	Military Instruction		3	3.
Total..		16	14	52.5

### SOPHOMORE YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chém. 9	Qualitative Analysis		4	4.5
C. E. 3	Topographic, Geodetic and City Surveying and Mapping	1	8	10.5
Arch. 3-5	Shades, Shadows and Perspective		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			
Geol. 1	Ferrous Metallurgy	2		5.
Math. 21	Analytic Geometry	2		5.
Math. 25	Calculus	3		7.5
Phys. 9	Physics	4		10.
Mil. 3	Military Instruction		3	3.
Total..		15	18	56.

#### Second Term

Chém. 10	Qualitative Analysis		4	4.5
C. E. 4	Road and Railroad Surveying	1	3	5.5
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading			
Geol. 10	Geology	3		7.5
Math. 26	Calculus	5		12.5
Phys. 10	Physics	4		10.
Phys. 14	Physics Laboratory		3	4.
Phys. 20	Slide Rule		.5	
Mil. 4	Military Instruction		3	3.
Total..		16	13.5	55.

Georgia School of Technology

JUNIOR YEAR

First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
C. E. 11	Railway Economics	2		
C. E. 15	Hydraulics	3	3	8.
C. E. 20	Masonry Construction	2		7.5
Eng. 31	English Literature	3		5.
Eng. 32	Literary Thesis			7.5
Ex. E. 41	Hydraulic Laboratory		3	
Math. 35	Differential Equations	2		4.
M. L. 1	German			5.
M. L. 7	French	3		
M. L. 13	Spanish			7.5
Phys. 11	Physics	3		
Phys. 15	Physics Laboratory		3	7.5
Mil. 5	Military Instruction		3	4.
Total..		18	12	59.

Second Term

Chem. 21a	Organic Chemistry	3		7.5
Chem. 23a	Organic Laboratory		3	3.
C. E. 8	Sanitary Engineering		6	6.
C. E. 45	Sewage and Water Supply	3		7.5
Eng. 32	English Literature	3		7.5
Eng. 36	Literary Thesis			7.5
Ex. E. 1a	Analytic Mechanics	3		
Ex. E. 11b	Mechanics of Materials	3		7.5
M. L. 2	German			7.5
M. L. 8	French	3		
M. L. 14	Spanish			7.5
Mil. 6	Military Instruction		3	3.
Total..		18	12	57.

SENIOR YEAR

First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
C. E. 7	Sanitary Engineering	3		7.5
C. E. 22	Highway Engineering	2	3	8.
C. E. 41	Framed Structures	3		7.5
C. E. 41b	Truss Analysis		3	3.
C. E. 47	Re-inforced Concrete	1	3	5.5
Com. 71	Business Organization & Managem't		1	2.
Ex. E. 57	Materials Lab.		3	4.
Ex. E. 73	Elementary Steam Laboratory		3	4.
Ex. E. 77	Heat Engines	3		7.5
M. L. 3	German			
M. L. 9	French	3		
M. L. 15	Spanish			6.
Mil. 7	Military Instruction		3	3.
Total..		15	19	58.

Second Term

Arch. 22	Elements of Architecture		3	3.
C. E. 42	Framed Structures	3		7.5
C. E. 42b	Structural Detailing		6	6.
C. E. 48	Concrete Structures		3	4.
C. E. 52	Highway Engineering	2	6	11.
Com. 72	Commercial Law		1	2.
E. E. 2	Applied Electricity	2		5.
E. E. 3a	Electrical Engineering Laboratory		3	4.
M. L. 4	German			
M. L. 10	French	3		
M. L. 16	Spanish			6.
Mil. 8	Military Instruction		3	3.
	Thesis		5	5.
Total..		10	30	56.

Department of Civil Engineering

Civil Engineering

C. E. 1 and 1a. Plane Surveying.

Mr. Vierheller.

Prerequisites, Math. 11 and 15.

Freshmen C. E. and Sophomore E. E. and M. E., first or second term, one hour lecture and three hours practice.

The construction, care, and adjustment of instruments commonly used in surveying; their use in traversing, land surveying, and differential and profile leveling; computation of areas, parting off land and the reduction and plotting of field notes.

A traverse enclosing about thirty acres is run usually in a semi-developed section of the city, the details tied in and a plot made by each student.

Texts: *Merriman & Brooks*, "Hand Book for Surveyors," and *Breed and Hosmer's* "Principles and Practice of Plane Surveying," Part I, for C. E.

C. E. 3. Topographic, Geodetic and City Surveying and Mapping.

Mr. Vierheller.

Prerequisite, C. E. 1.

Sophomore C. E., first term, one hour recitation and eight hours practice.

A continuation of C. E. 1, including the theory of the Stadia and the Plane Table and their application in topographic surveying; city and mine surveying, and the U. S. Government system of laying out public lands; the elements of Geodetic surveying, with the adjustments of the measured and calculated data by the method of Least Squares; the general system of filing and recording deeds in the State of Georgia; plotting, finishing and filing maps; conventional topographic signs and symbols in ink and water color.

A topographic survey is made of a section of the city—usually a park—selected so as to offer as great diversion as possible and to exemplify all of the various methods of horizontal and vertical control and to afford practice in sketching contours, water lining, etc. The field notes



are plotted up and a complete map of the section made by each member of the class.

Text: *Breed and Hosmer's* "Principles and Practice of Surveying." Part I.

#### C. E. 4. Road and Railroad Surveying.

*Mr. Vierheller.*

Prerequisite, C. E. 3.

Sophomore, C. E., second term, one hour recitation and three hours practice.

Reconnaissance and preliminary surveys; simple, compound, and reverse curves; the American Railway Spiral, with a discussion of various other forms of easement curves; right of way description; location earth-work computations, haul and the Mass Diagram.

Problems so designed as to illustrate principles, as well as involve individual thinking in their solution, are given throughout the course. Those involving curves and best adapted for the purpose, are "run in" in the field. Checks on all computations and field work are required. Practice is also obtained in cross sectioning and setting slope-stakes.

Text: *Allen's* "Railroad Curves and Earthwork, with Tables."

#### C. E. 7. Sanitary Engineering.

*Mr. Stubbs.*

Prerequisite, Chem. 2-6 and 10.

Senior C. E., first term, three hours lecture.

Sewerage Treatment and Water Purification with the resume of the most recent work being done along this line; the underlying principles of sewerage treatment; a discussion of the different types of sewerage treatment devices, and the importance of careful and intelligent supervision of sewage treatment and water works.

#### C. E. 8. Sanitary Engineering.

*Mr. Stubbs.*

Prerequisite, C. E. 7.

Junior C. E., second term, four hours laboratory.

A Laboratory Course in General Bacteriology and taking up for study the bacteria that are most commonly found in sewage, water and milk.

There are several sewage treatment works and water purification plants within the immediate vicinity of the school and these will be visited as often as possible for practical demonstrations.

#### C. E. 11. Railroad Economics and Construction.

*Professor Branch and Professor Kneale.*

Prerequisite, C. E. 4.

Junior C. E., first term, three hours of research work or office work.

Organization, capitalization, stocks and bonds: The duties of the engineer: The permanent way, rails and rail fastenings, cross-ties, ballast and the road-bed, drainage, turnouts, frogs and switches, yard design; signaling: The locomotive and its work; locomotive types, train resistance, train speeds, tractive effort, locomotive and grade problems: Train movement and operating expenses and relation to grades, distance, curvature, etc.

Text: *Raymond's* "Railroad Engineering."

References to be consulted: *Wellington's* "Economic Theory of Railway Location" *Tratman's* "Track and Track-work"; *Beahan's* "Field Practice of Railway Location"; *Lavis's* "Railway Location, Surveys and Estimates"; *Goss's* "Locomotive Performance"; *Henderson's* "Locomotive Operation," etc., etc.

#### C. E. 13. Graphical Analysis of Roof Trusses.

*Professor Branch and Mr. Vierheller.*

Prerequisite, Phys. 2.

Junior and Special Arch., first term, three hours, lectures or drawing.

A course in the design of simple roof trusses, including the application of the force and equilibrium polygons and the Maxwell diagrams in the determination of stresses due to dead load, wind and snow loads, etc. The design of a roof truss, wood and steel is given in alternate years.

Text: "Design of Simple Roof-Trusses in Wood and Steel," *Howe.*

C. E. 15 and 15a. **Hydraulics.**

*Professor Branch and Professor Kneale.*

Prerequisites, Phys. 9, 10, 14 and 20, Math. 26.

C. E. 15, Junior C. E., first term, three lectures with problems.

C. E. 15a, Junior M. E. and Senior E. E., second term, three lectures with problems.

The study of the principles of laws which govern and control the behavior of liquids at rest or in motion. It includes the hydrostatic of water pressure as applied to simple structures and machines; the hydrokinetics of the flow, discharge, and measurement of water together with applications in the design of canals, conduits, pipe lines, etc.; and the hydrodynamics of the use of water in the generation and transmission of power.

Text: *Merriman's "Treatise on Hydraulics."*

C. E. 20. **Masonry Construction, Foundations and Retaining Walls.**

*Mr. Vierheller.*

Prerequisites or parallel, Math. 26.

Junior or Senior C. E., first term, two hours lectures.

A study of the materials commonly used in masonry structures, including the manufacture of brick, lime and cement, the properties of sand, gravel and broken stone. Plain concrete; proportions, strength, elasticity, methods of proportioning, etc. Mixing and placing concrete and the construction and cost of forms. Brick Masonry, cost and data for estimates. Masonry structures: *Hankin's* Theory of Earth Pressure, active and passive stresses in granular masses. Ordinary foundations, pile foundations, foundations under water, including coffer-dam, crib and pneumatic caisson processes: Foundations under eccentric or moving loads. The design of various types of dams, piers, abutments, and retaining walls of gravity section.

Numerous problems are given in design of structures throughout the course.

Texts: *Baker's "Masonry Construction"* and *Howe's "Retaining Walls for Earth."*

C. E. 22. **Highway Engineering.**

*Professor Kneale.*

Prerequisite, C. E. 5.

Parallel, Ex. E. 1a.

Senior C. E., first term, two lectures, four hours laboratory.

This course includes the historic, economic, and structural phases of highway engineering. Especial emphasis is placed on traffic census, traffic development and traffic classification as related to type of highway; to plotting, mapping, paper location, and final field location from reconnaissance and location surveys; to soil classification and use in construction and maintenance; to selection and construction of type of road to give the maximum service at a minimum cost; to effect of traffic on permanence of wearing surface; to preserving surfaces through artificial binders; and to road machinery. The laboratory work will include a study of road materials, with especial emphasis upon the testing of stone, clay, brick, concrete, etc.

Text: *Blanchard & Drowne's "A Textbook on Highway Engineering."*

C. E. 34. **Masonry Laboratory.**

*Professor Branch, Professor Tracy.*

Juniors in Industrial Education, second term, three hours.

This course will consist of practical laboratory study of mortars and mortar mixture, concrete, and simple operations in plastering, and brick and stone masonry. Juniors and Seniors in Industrial Education may elect additional advanced work in masonry work. Not open to engineering students.

C. E. 41. **Framed Structures.**

*Professor Branch.*

Prerequisites, Ex. E. 1a and M. E. 28.

Parallel, M. E. 31 and C. E. 41b.

Senior C. E., first term, three lecture hours.

A course in which is grouped the analytical and graphical determinations of stresses in framed structures. The



subjects studied are girders, roof and bridge trusses of various types, wood and steel trestles, towers, tanks, etc. The work includes the use of uniform and concentrated loads, snow and wind loads, and moving loads with their impact contribution to the stresses, maximum and minimum stresses, with their requirements for reversals and counters. Each student computes the stresses from given loadings for a roof truss, plate girder, and a Pratt truss, which are used in C. E. 42.

Text: *Johnson's "Modern Framed Structures."*

#### C. E. 41b. Truss Analysis.

*Professor Branch.*

Prerequisite, Ex. E 1a.

Parallel, C. E. 41.

Senior C. E., first term.

Three drawing hours per week, mainly devoted to algebraic and graphic determination of stresses in trusses, etc.

#### C. E. 42. Framed Structures.

*Professor Branch.*

Prerequisite, C. E. 41.

Parallel, C. E. 42b.

Senior C. E., second term, three lecture hours.

A course consisting of the design and detailing of a roof truss, a plate girder and a Pratt truss, with determination of pin sizes, pin plates, joint plates, camber diagrams, etc. Bills of material are made to accompany the shop drawings. Detail plans of similar structures and of tanks, tower, trestle and steel buildings are studied in and out of class. The course closes with a study of structural erection.

#### C. E. 42b. Design of Structures.

*Professor Branch.*

Prerequisite, C. E. 41b.

Parallel, C. E. 42.

Senior C. E., second term, six hours.

Drawing room work. Library research and visits to existing plants and structures.

#### C. E. 45. Sewerage and Water Supply.

*Professor Branch.*

Prerequisite, C. E. 15.

Junior C. E., second term, three lecture hours.

A study of the theory of sewerage systems, their construction and maintenance. Sewer out-falls, and methods of disposal and treatment. Dilution, precipitation, irrigation, natural, and artificial filter, filtration processes, contact beds, septic tanks and contact and sprinkling filters.

Text: *Folwell's "Sewerage" and Folwell's "Water Supply,"* and lectures.

#### C. E. 47. Reinforced Concrete.

*Professor Kneale.*

Prerequisites, C. E. 20, Ex. E. 52a, M. E. 28.

Senior C. E., first term, one hour recitation and three hours office.

Construction of shear and moment diagrams under intricate loading and practical application in reinforced concrete design; *Clapeyron's* Theorem and the continuous girder: vertical and horizontal shear and diagonal tension. The Straight Line flexure formulas with a discussion of the parabolic formula and other formulas. The construction of diagrams and their use in the solution of the formulas. The design of slabs, T-beams, girders and columns. One hour per week for first half term and three hours per week for the term are given to the design of a reinforced concrete arch. Three hours per week for one term are devoted to the design of small T-beam and girder bridges.

Text: *Hool's "Reinforced Concrete Construction,"* Vol. 1 and 2.

#### C. E. 48. Design of Higher Structures in Concrete.

*Professor Kneale.*

Senior C. E., second term, eight hours Structural course, four hours Highway course.

A continuation of C. E. 47, devoted mainly to the design of special structures, high office buildings, etc. The

students are divided into groups of two each, and each group given a special problem. While each student is placed very largely on his own resources and given access to the blue print files, etc., he is carefully watched and guided by his instructor to prevent him from arriving at absurdities.

**C. E. 52. Highway Engineering.**

*Professor Kneale.*

Prerequisite, M. E. 31.

Senior C. E., second term, two lectures and six hours laboratory.

This course is a continuation of C. E. 22. It includes the design of highway structures; the laboratory analysis of artificial road binders; the maintenance of various types of pavements; road law; road specifications, and contracts; bond issues and other methods of financing; also a study of foreign highway practice, and road systems.

Text same as in C. E. 22, together with bulletins of Office of Public Roads, state highway departments, etc., and current road literature.

**SCHOOL OF COMMERCE.**

PROFESSOR WATTERS, MESSRS. STARK, KELL, HALSEY, BYINGTON, CAMPBELL, DOUGLASS, GLASS, JONES, AND RAMSPECK.

In its college courses in Business Organization and Scientific management, the Georgia School of Technology provides a systematic training for men who have ambition to improve their situation and become leaders in the business world.

This course contains the essentials for a well rounded business man and eliminates the courses usually studied for the sake of having studied them. It covers the fields of Business Administration, Accounting, Advertising, Salesmanship, Finance, Credits and Law. This special training added to his native ability will enable a business man to expand his business or improve his situation.

The instruction in the School of Commerce, Georgia School of Technology aims to prepare ambitious and en-

ergetic young men for business and to assist older men already in business to equip themselves for more responsible positions. The work is based on the belief that through a study of commercial methods and of economic forces, the young men can obtain valuable mental discipline and at the same time acquire technical knowledge.

**Training By Experience Alone Is Wasteful.**

Men who rise in a business where they are employed may do so by virtue of long and faithful service, but they will see many other men pass them upon the road. Experience, alone, advances one slowly. Mere painstaking work frequently leaves one in a rut from which there is no climbing. It is the man with ambition coupled with determination, energy and willingness to pay the price in hard work, who passes his more easy-going associate on the way up the hill.

To learn from trial and mistake, in the slow school of experience, is costly in the years lost. In the old days, doctors and lawyers and engineers were trained by setting to work and discovering their mistakes for themselves, without profiting by the experience of others. That regime is past. The student in any branch of science is given, from the first, instruction based on the knowledge of the greatest minds in his profession. He may save several years experience and begin his work with all the experience of experts to guide him.

The courses offered are designed to prepare men for:

Advertising	Commercial Secretaryship
Business Management	C. P. A. Examination
Commercial Teaching	Export and Import Trading
Credits and Collections	Real Estate
Insurance	Retail Merchandising
Wholesale Merchandising	Public Accounting
Private Accounting	Salesmanship
Government Service	Transportation
Banking	Journalism

**Day and Evening Schools.**

The courses described in this catalog are given in the day school. Business men of Atlanta, who are employed



during day, should write for special bulletin giving a complete course of study offered in the evening school. The day school is located on the college campus at 165 West North Avenue. The evening school classes are held in the Walton Building, located in the business district of the city.

### Degrees Conferred.

The course in the day school leads to the degree of B.S. in Commerce; in the evening school leads to the degree of B.C.S., (Bachelor of Commercial Science). Students in the evening school who cannot meet the entrance requirements will be granted a certificate of proficiency upon completion of the course required of the regular students. This certificate will not confer a degree.

### Elective Courses.

Students who are preparing themselves to enter certain lines of business and find it to their advantage to substitute a limited amount of work in one of the engineering departments for courses in the School of Commerce, may do so upon recommendation of the dean and approval of the faculty. This institution offers excellent opportunities for commerce students to receive practical working knowledge of Mechanical, Civil, Electrical, Chemical and Textile Engineering, Drawing and Architecture.

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 11	Economics: Resources and Industries			
Com. 13	Accounting: Introductory	2	1	6.
Com. 15	Law: Contracts	1	6	8.5
Com. 17	Management: Personal Efficiency	2	1	6.
Com. 19	Mathematics: Business	2	2	7.
Eng. 11	English: Rhetoric	3		7.5
Eng. 15	English: Theme Writing	3		7.5
M. E. 3	Engineering: Workshop		1	1.
Dr. 1	Drawing: Free Hand		3	3.
Mil. 1	Military Instructions		3	3.
Total..		13	20	52.5

### Department of Commerce

#### Second Term

	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 12	Economics: Resources and Industries	2	1	6.
Com. 14	Accounting: Introductory	1	9	10.
Com. 16	Law: Negotiable Instruments and Agency	2	1	6.
Com. 18	Management: Business Efficiency	2	2	7.
Com. 20	Mathematics: Commercial Algebra	3		7.5
Eng. 12	English: Rhetoric	3		7.5
Eng. 16	English: Theme Writing		1	1.
M. E. 4	Engineering: Woodshop		3	3.
Mil. 2	Military Instruction		3	3.
Total..		13	21	51.

### SOPHOMORE YEAR

#### First Term

Abbrev.	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 21	Accounting: Theory	2		5.
Com. 23	Accounting: Principles	2	9	12.
Com. 25	Marketing: Salesmanship	2		5.
Com. 27	Law: Partnership and Corporations	2		5.
Com. 29	Management: Transportation	2		5.
Com. 31	Finance: Principles	2		5.
Eng. 21	English: American Literature	3		7.5
Eng. 27	English: Parallel Reading			
M. E. 11	Engineering: Machine Shop		3	3.
Mil. 3	Military Instructions		3	3.
Total..		15	15	50.5

#### Second Term

Com. 22	Accounting: Theory	2	9	12.
Com. 24	Accounting: Principles	2		5.
Com. 26	Marketing: Retail and Wholesale Merchandising	2		5.
Com. 28	Law: Suretyship and Real Estate	2		5.
Com. 30	Management: Railroad Traffic	2		5.
Com. 32	Finance: Banking	2		5.
Eng. 24	Economics: Principles	3		7.5
Eng. 28	English: Parallel Reading			
M. E. 12	Engineering: Machine Shop		3	3.
Mil. 3	Military Instructions		3	3.
Total..		15	15	50.5

### JUNIOR YEAR

#### First Term

Abbrev.	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 41	Accounting: Problems	2	4	9.
Com. 43	Accounting: Factory Cost	2	3	8.
Com. 45	Marketing: Foreign Trade	2		5.
Com. 47	Finance: Corporation	2		5.
Com. 49	Economics: Industrial History	2		5.
Eng. 31	English: English Literature	3		7.5
Eng. 35	English: Thesis			
M. L. 13	Commercial Spanish	3		7.5
Mil. 4	Military Instructions		3	3.
Total..		16	10	50.

## Georgia School of Technology

## Second Term

Abbrev.	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 42	Accounting: Problems	2	4	9.
Com. 44	Accounting: Factory Cost		3	3.
Com. 46	Marketing: Foreign Trade	2		3.
Com. 48	Finance: Corporation	2		5.
Com. 50	Economics: Industrial History	2		5.
Com. 52	Economics: American Government	2		5.
Eng. 32	English: English Literature	3		5.
Eng. 35	English: Thesis			7.5
M. L. 14	Commercial Spanish	3		7.5
Mil. 5	Military Instruction		3	3.
Total..		16	10	50.

## SENIOR YEAR

## First Term

Abbrev.	Subject	Rec. Hrs.	Lab. Hrs.	Eq'v.
Com. 61	Accounting: Auditing, Theory and Practice	2	3	8.
Com. 63	Marketing: Advertising, Theory and Practice	2	3	8.
Com. 65	Law: International Diplomacy	2		8.
Com. 67	Management: Insurance	2		5.
Com. 69	Management: Industrial	2		5.
Com. 73	Finance: Investments	2		5.
Com. 75	English: Business Correspondence	1	1	3.5
M. L. 15	Commercial Spanish	3		7.5
Mil. 6	Military Instruction		3	3.
Total..		16	10	50.

## Second Term

Com. 62	Accounting: Auditing, Theory and Practice	2	3	8.
Com. 64	Marketing: Advertising, Theory and Practice	2	3	8.
Com. 66	Economics: Government and Its Relation to Business	2		5.
Com. 68	Management: Real Estate	2		5.
Com. 70	Management: Mercantile Credits	2		5.
Com. 74	Finance: Investments	2		5.
Com. 76	English: Business Correspondence	1	1	3.5
M. L. 16	Commercial Spanish	3		7.5
Mil. 7	Military Instruction		3	3.
Total..		16	10	50.

## Courses of Instruction.

## Com. 11 and 12. Economic Resources and Industries.

Freshman, first and second terms, three hours.

This course forms a foundation for the study of Marketing, Economics, and Finance. It will be required of all students. It covers the study of the location and distribution of natural resources. The location of industrial enterprises. The influence of geographical and climatic conditions on the development of trade. Special attention will be given to the study of mineral and food products, textile materials, skins, and leather

## Department of Commerce

goods, oils, woods, drugs, dye-stuffs, and how they influence the growth of cities and transportation facilities.

## Com. 13 and 14. Introductory Accounting.

Freshman, first and second terms. First term, one hour recitation, six hours laboratory. Second term, one hour recitation and nine hours laboratory.

This is an introductory course to accounting. It does not require a previous knowledge of bookkeeping. It includes the theory of debits and credits, the construction of the trial balance, the profit and loss statement, and the balance sheet. Practice is given in the use of the various types of modern books of original entry. Students who have completed a high school course in bookkeeping may substitute another course for the first term's work by securing a special permit from the head of the department. All commerce students will be required to take the second term's work.

## Com. 15. Law of Contracts.

Freshman, First term, two hours recitation, one hour laboratory.

This course gives the student a working knowledge of the law of contracts. It deals with law in general, legal rights and remedies, contract consideration, agreement, and parties, contracts in writing, consent, illegal contracts, assignments, interpretation, discharge of contracts, remedies for breach of contracts and conflict of laws.

## Com. 16. Law of Negotiable Instruments and Agency.

Freshman, first term, two hours recitation; one hour, laboratory.

This course deals with negotiable contracts and instruments; consideration, negotiation and rights of holders of negotiable paper; liability of parties, presentation for payment, notice of dishonor, discharge; bills of exchange, promissory notes and cheques; agency, authority of agents, termination of agency and special agents.

## Com. 17. Personal Efficiency.

Freshman, First term, two hours recitation, two hours laboratory.



The principal reason for pursuing any course of study is to increase one's personal efficiency, that is, to secure greater results from the same amount of effort. It is a study of the individual. This particular course develops the factors and the individual methods of thought, study, and work which make it easier for the student to improve mind, body, and his relations with other people—it might be called one of the studies of applied psychology, the science of human behavior.

#### Com. 18. Business Efficiency.

Freshman, second term, two hours recitation, two hours laboratory.

The purpose of this course is to clearly outline the savings of men, materials and money which result from more efficient use of the business units at our command. It is one of the courses which will show that there is more to scientific management than just the matter of greater production.

The course deals with the relation of the management and the plant and labor; with work methods, hiring of labor, and the training of the work force; with habits, fatigue, work environment and welfare work; with accidents and fire prevention; with wages, scientific piece rates, and the relations of organized workers to efficiency methods.

#### Com. 19 and 20. Business Mathematics.

Freshman, First and second terms, three hours recitation.

This course presupposes a knowledge of Algebra and advanced arithmetic. It is intended to cover the fields of mathematics a business man is most likely to need. It forms the basis for the mathematics used in the courses of finance and accounting. It therefore includes such topics as, slide rule, logarithms, insurance, investments, equations of accounts, interest, annuities, amortization, depreciation, and graphs.

#### Com. 21 and 22. Theory of Accounts.

Sophomore, first and second terms, two hours recitation.

This course represents the connecting link between theory and practice. The handling of each individual

asset account, and liability account, is taken up in detail, giving the "why" of each step and illustrating the practical application with a problem. The preparation of the different forms of balance sheets, profit and loss accounts, statements of affairs, statements of realization and liquidation are illustrated and explained in full.

#### Com. 23 and 24. Principles of Accounting.

Sophomore, first and second terms, two hours recitations, six hours laboratory.

In this course methods of construction of a complicated system of accounts will be explained and illustrated by setting up a very crude system then changing the form to a modern system.

The course is built up to show the evolution of the holding company by means of explaining the legal types of organization preceding the same, namely, sole proprietorship, co-partnership and corporation. The books begin with single entry but are changed quickly to double entry. They are first run on a cash basis but are soon changed to an accrual basis. The sole proprietor engages first in a simple retail business which is gradually expanded into one of the departmental type. This is followed by manufacturing and wholesaling. A general and a special partner is taken in. One partner dies. The business is incorporated. Among the corporate transactions there is a bond issue with sinking fund provision; a retail store run as a separate department; a merger; the failure of an allied company, etc. Consolidation is eventually effected and a holding company is organized to take over the several underlying companies. The transactions of the holding company are carried on for a time in order to bring out the exact relation of the parent company to the subsidiaries.

#### Com. 25. Salesmanship.

Sophomore, first term, two hours recitation.

This course will deal with the elements to be considered in conducting an aggressive selling campaign.

The first part will go into the principles of personal salesmanship. While the scientific method has been employed in discovering and formulating these principles, salesmanship is looked upon as a friendly, redblooded, man

to man transaction where personality counts, rather than a cold scientific process. Among the topics discussed are: essential qualifications of the salesman, retail, staple and specialty selling, organizing and opening a new territory, planning a salesman's work, preparing for the interview, the interview, methods of closing, handling objections, securing co-operation and influence and human appeals that sell.

**Com. 26. Retail and Wholesale Merchandising.**

Sophomore, second term, two hours recitation.

In this course is given the up-to-date working methods of both the wholesale and the retail merchants, which should be known by every executive regardless of his line of activity. The lectures will explain the methods of organizing and financing a store, sales campaign, operating and conducting the business, training the selling force, buying, stock keeping, advertising displays, the specialty store, the department store, the chain store, and the mail order house.

**Com. 27. Law of Partnership and Corporation.**

Sophomore, first term, two hour recitations.

This course deals with the formation of corporations; their management, including the issue and transfer of stock, the rights and liabilities of promoters, stockholders and directors; the proper method of holding corporate meetings and the keeping the records thereof; the taxes required of the ordinary business corporation. Partnership relations, capital, property, powers of partners, partnership dissolutions and its effects, the liability of individual partners for firm debts.

**Com. 28. Law of Real Estate and Suretyship.**

Sophomore, second term, two hours recitation.

This course covers carriers, guaranty and suretyship and real property. It deals with carriers of goods, their liability and duty to deliver, and other public duties; guaranty and suretyships, fire insurance, special policy provisions, loss and proceedings, life and accident insurance, real property, estates and titles, mortgages, landlord and tenant, wills and administration.

**Com. 29 and 30. Transportation and Traffic.**

Sophomore, first and second term, two hours recitation.

Railroad route and terminals, ocean highways and terminals. The organization of railroads and steamship companies and their work. Freight, passenger, and express service.

The theory of rate making, competition of transportation lines, transportation monopoly, discriminations and their effects, and rate regulation. Particular attention is devoted to leading discussions of the Interstate Commerce Commission.

**Com. 31. Principles of Finance.**

Sophomore, first term, two hours recitations.

A study of the courses which lead to the rise and fall of prices. The relation of money values to market prices; functions of money, quantities of money, banking and medium of exchange, centralized and decentralized banking systems. Panics and industrial depressions and monetary problems.

**Com. 32. Banking.**

Sophomore, second term, two hours recitation.

This course serves a two-fold purpose. It gives the working knowledge of a bank and at the same time teaches the student how to use the services of the bank to the greatest advantage in other lines of business. It deals with modern banking functions, classes of banks; bank loans, special loan problems, bank deposits, domestic exchange, foreign exchange, bank notes, clearing houses, bank organization and administration, capital and reserves, statements, government regulations, Federal Reserve Act, operation and control of Reserve System.

**Com. 41 and 42. Practical Accounting Problems.**

Junior, first and second terms, two hours recitation, four hours laboratory.

This course covers a part of the field of accounting problems such as are encountered in every day business and on C. P. A. examinations. It deals with single entry statements of profit and loss, single entry balance sheet construction, work sheet for adjusting a trial bal-



ance, and distribution to profit and loss and balance sheet columns, the preparation of statements for factory operations, the opening and closing of sets of accounts for the different forms of organizations, the special problems of different corporate openings, problems involved in mergers, consolidations, promotion, holding companies, stock donations, refunding, voluntary bankruptcy, statement of affairs and deficiency account, receivership, reorganization, realization and liquidation of insolvent sole proprietors, administrative accounts. In all problems the work sheets and various report forms are worked out as the case may require. The problems have been taken from practical experience in the accounting field and from C. P. A. examinations.

**Com. 43 and 44. Factory Cost Accounting.**

Junior, first and second term, first term, two hours recitation, three hours laboratory. Second term, three hours laboratory.

Lectures will be given explaining the elements of costs, principles and general methods of cost finding, direct and indirect expenses, wage systems, recording material and labor costs, devising cost systems. The students will be required to work up a set of manufacturing cost books during the first semester. During the last semester they will be given problems involving the various phases of cost accounting.

**Com. 45 and 46. Foreign Trade.**

Junior, first and second terms, two hours recitations.

This course involves a study of the methods used by the trading export and banking houses of the country. The selecting of an export market, development of the market articles to be exported—their uses, possible substitutions, customs, habits, social or economic condition affecting the possible use in a foreign country; international credits, selling methods, contracts, and foreign exchange; special attention will be given to South American trade.

**Com. 47 and 48. Corporation Finance.**

Junior, first and second terms, two hours recitation.

Nearly every business man is interested in the formation or management of a corporation, or in buying and

selling stocks of corporations. The methods by which corporations are organized and financed and the principles that underlie corporate management are fully explained. The difference between what is permissible at law and what is expedient in practice will be emphasized. The course includes the instruments of finance, the methods of raising and managing investments and working capital, inter-business relations, distribution of profits, causes and remedies for failures.

**Com. 49 and 50. Industrial History.**

Junior, first and second terms, two hours recitation.

This course traces the progress and development of Europe and its effect on the commercial situation in America. It shows the relation between commercial progress and political history. Special emphasis is given to the development of industry, agriculture and land tenure, growth of slavery, internal improvements, finance, development of banking, combination of labor and capital, growth of transportation facilities, natural resources, large scale manufacturing, commercial expansion, education and general social life.

**Com. 52. American Government.**

Junior, second term, two hours recitation.

The intention of this course is to make better citizens and more intelligent voters out of the students. A special study is made of the methods employed by congress, the courts, the president and the administrative departments of the government, in the performance of the functions with which they are charged. This course will deal with the actual working of the United States and state governments rather than a historical study of the various institutions.

**Com. 61 and 62. Auditing, Theory and Practice.**

Senior, first and second terms, two hours recitation, two hours laboratory.

The student will be taught to prepare working audit programs for various classes of business. Methods of accounting used by unsuccessful concerns will be explained and the causes of the failure analyzed. Methods followed by concerns in need of capital involving hypoth-

education of assets, and manipulation of accounts with allied and subsidiary concerns will be discussed. Actual practice will be given in the audit of books of various lines of business.

**Com. 63 and 64. Advertising, Theory and Practice.**

Senior, first and second terms, two hours recitations, three hours laboratory.

This course covers the essential principles of Advertising, copy, display and campaigns. Specific examples will be considered in connection with each of the subjects mentioned. Such time will be spent on lecture work as is necessary to give the student the proper basis upon which to consider the examples which will be taken.

This course also requires the work in routine advertising, the city campaign, the state campaign, and the national campaign. It deals with the problems of analysis of commodities, the functions of advertising copy, newspaper, magazines, bulletins, bill-board, street car mediums; use of novelties, and agency work.

During the practice period the students will visit business houses of the city and learn how the various kinds of cuts are made and how advertisements are set up. Considerable time will be devoted to the actual construction of advertisements.

**Com. 65. International Diplomacy.**

Senior, first term, two hours recitation.

This course treats of the rights and obligations of nations in times of peace and war, trade treaties, rights of American citizens traveling in foreign countries, and consular methods and service.

**Com. 66. Government and Its Relation to Business.**

Senior, second term.

Many laws have been passed recently to regulate business. It is necessary for the business man, for his own protection to study these laws and their effects on the business. Such questions are also discussed as taxation, land registration, labor laws, government inspection, child labor, industrial combinations, government regulation of business, and public ownership. This course also takes up a study of the departments of government which pro-

mote business, and how the greatest amount of profit may be derived from these departments.

**Com. 67. Insurance.**

Senior, first term, two hours recitation.

This subject treated from the view point of both the policy holder and the insurance company. It involves a study of types of policies, policy contracts, principles of rate making, hazards, reserves for protection of policy holders, examination of the company to determine its safety, adjustments of losses, fire protection and prevention, state regulation and fixing of rates, and the methods of organizing an insurance company or agency.

**Com. 68. Real Estate.**

Senior, second term, two hours recitation.

A man can scarcely be in business without becoming interested in real estate, either as owner or lessee. It is often profitable and sometimes a dangerous field of investment. This is a practical course dealing with the business problems connected with the sale, purchase and management of real estate. The following topics are included in this study: real estate brokerage, contracts in real estate, liens, taxes and assessments, the transfer of titles, deeds, bonds and mortgages, leases, methods of arriving at the valuation of real estate, surveyors relations to real estate and the work of the architect, land registration.

**Com. 69. Industrial Management.**

Senior, first term, two hours recitation.

This course involves a study of the fundamental principles of factory organization and how these principles may be applied in placing a manufacturing business on a profitable basis. It discusses organization elements of an industrial body; departmental authorities—their duties and responsibilities, how to pay labor, welfare work, depreciation and its relation to costs, how the executive may keep in touch with his factory and how to cut labor costs.

**Com. 70. Mercantile Credits.**

Senior, second term, two hours recitation.

A practical study of the factors to be considered when credit is granted, and the routine of the credit and col-



lection departments. It explains the duties of the members of the credit department, the granting of credit to customers, bank credits, commercial agencies, interchange of credit information about customers, checking orders, collection and credit man's methods, causes of failure, bankruptcy of claims and adjustments.

**Com. 71. Business Administration.**

Senior, first term, one hour.

All seniors in the various department, except Commerce, are required to take this course, which comprises a brief review of the fundamental principles of labor problems showing the relation of these principles to modern business organizations. Throughout the course the importance of the human factor in all business organization is emphasized.

**Com. 72. Commercial Law.**

Senior, second term, one hour.

This course, which is a continuation of Com. 71, consists of a series of lectures on contracts, negotiable Instruments, Corporations.

**Com. 73 and 74. Investments.**

Senior, first and second terms, two hours recitation.

This course is intended to present the methods of analyzing and determining the values of the various kinds of stocks and bonds. It prepares the business man to seek out safe investments for his money. A life-time's savings may be lost in a day. It, also, gives special preparation for a position as secretary and treasurer of a corporation. The students will be required to study and make reports on stocks and bonds of railway, manufacturing, banking and other classes of corporations, also municipal and farm bonds and mortgages.

**Com. 75 and 76. Business Correspondence.**

Senior, first and second terms, one hour recitation, one hour laboratory.

The daily correspondence of every concern is a great opportunity for advertising. Every letter that is properly written lays the foundation for future business. The

type of the letter indicates the type of the concern. Tactful letters save customers and make friends. This course teaches how to make every letter a sales letter whether it be to sell goods, collect money, or adjust a complaint. Lectures are given covering the elements of letter writing. Then the student is required to write a letter embodying the principles covered. The letter is reviewed by the instructor. The faults are corrected, the good points are noted and suggestions are made to assist the student to improve his style.

**THE CO-OPERATIVE PLAN.**

PROFESSOR BRANCH AND PROFESSOR LYTLE.

The co-operative plan which is now applied to the electrical and mechanical engineering courses at the Georgia School of Technology, is briefly as follows:

To enter, the student must qualify in exactly the same manner as described under entrance requirements for the regular four year engineering courses, and show that he is capable of making good, both in the school and in the shop. Those selected for these courses are given jobs in the summer at the foundry, factory, or machine shop in the city, which best fits the aims of the individual. These students are hired as regular workmen and spend every week until the last of September; each doing the work of a helper or apprentice in one of the trades allied with engineering.

When the fall term opens, the students at each shop are grouped in pairs and each pair assigned to one job, for which each individual is responsible every other two weeks of the year. One of each pair from all the shops, attends school the first two weeks and this number constitutes Section I. At the beginning of the next two weeks those who have been in school return to their shops and allow the other student who have been at work to have their turn at school. This number constitutes Section II. Thus while Section I again takes up shop work so that the jobs are never vacant, Section II has the school work repeated for them. This alternation is continued throughout the five years of the courses. Students may enter in the fall, but it is preferable to all concerned to begin as much before then as possible.

The "Co-op." as he is called, has a short vacation at Christmas and two weeks during the summer, but this time

is taken from school weeks so that the shop arrangement is entirely on a business basis. Due to the extra year, the summer class work and full schedules during the regular terms, it is possible to give the full engineering courses leading to degrees. Nothing is omitted, nothing is abridged but much of the practical is gained.

Total school expenses are identical with the regular four year courses.

The student-worker is paid wages from 15 cents an hour up to 40 cents an hour, and is under the regular discipline of the shop. The financial income varying from \$200.00 to \$500.00 a year, is helpful to all, but the great merit of the plan is the four year acquaintance with actual industrial conditions. To be shop trained as well as school trained and thus understand shop men, shop methods and shop appliances, gives the co-op. graduate an experience that will reward his investment of energy and time.

The theory of the class room and the practice of the shop are co-ordinated as far as possible. The reaction of each upon the other is helpful in developing a student for the position he must fill upon graduation. The usual apprenticeship required of college men after graduation is either shortened or eliminated. The co-op. is moulded by his double environment to be versatile, independent and efficient. He is already learning life lessons in a world of reality.

The school and shop authorities confer in regard to the work of the student and as far as is permissible he is transferred from one department to another. For instance, a student often starts in the machine shop. After a few months on each of the main types of machines he is allowed to spend six months in the foundry. He is frequently found at the end of the course in the draughting room or office, already doing work of considerable engineering responsibility. Obviously such a man is valuable to his present employer. That is the reason why employers are co-operating with colleges through this plan. The benefits are mutual.

The work of the first three years is the same for the two degrees and is given below only once. The Summer work arrangement depends on the personnel of the Summer School Faculty, and varies from year to year.

(S) indicates work which usually comes in the summer.

## CO-OPERATIVE PLAN.

## Electrical Engineering and Mechanical Engineering.

A minimum of three hours per week military drill is required each term.

## FRESHMAN YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	6		7.5
Chem. 5	Chemical Laboratory		4	2.
Dr. 1	Free Hand Drawing		6	3.
Dr. 2	Descriptive Geometry	3		3.75
Eng. 11	Rhetoric	6		7.5
Eng. 15	Theme Writing	3		1.
Math. 11	Algebra	3		2.5
Math. 15	Trigonometry	3		3.75

## Second Term

Chem. 2	Inorganic Chemistry	6		7.5
Chem. 6	Chemical Laboratory		4	2.
Dr. 2	Descriptive Geometry	3		3.75
Dr. 4	Descriptive Geometry Drawing		6	3.
Eng. 12	Rhetoric	6		7.5
Eng. 16	Theme Writing	2		1.
Math. 11	Algebra	3		2.5
Math. 15	Trigonometry	3		7.5

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Dr. 13	Machine Drawing		6	3.
Eng. 21	American Literature	6		15.
Eng. 27	Parallel Reading			
Math. 21	Analytic Geometry	2		2.5
Math. 25	Calculus	3		7.5
Phys. 9	Physics	6		10.

## Second Term

Dr. 14	Machine Drawing		6	3.
Eng. 24	Political Economy	6		7.5
Eng. 28	Parallel Reading			
Math. 21	Analytic Geometry	2		2.5
Math. 26	Calculus	5		12.5
Phys. 10	Physics	6		10.
Phys. 14	Physics Laboratory		8	8.
Phys. 20	Slide Rule		.5	.5



## Georgia School of Technology

## FIRST JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
C. E. 15 (S)	Hydraulics	3		3.75
Dr. 21	Machine Drawing		6	3.
Dr. 23	Mechanism	4		5.
Eng. 31	English Literature	6		7.5
Eng. 35	Literary Thesis			
Math. 35	Differential Equations	3		3.75
M. L. 13	Spanish	6		7.5
Phys. 11	Physics	3		3.75
Phys. 15	Physics Laboratory		6	3.5

## Second Term

C. E. 15 (S)	Hydraulics	3		3.75
Dr. 22	Kinematic Drawing		6	3.
Dr. 23	Mechanism	4		5.
Eng. 32	English Literature	6		7.5
Eng. 36	Literary Thesis			
Math. 35	Differential Equations	3		3.75
M. L. 14	Spanish	6		7.5
Phys. 11	Physics	3		3.75
Phys. 15-17	Physics Laboratory		6	3.5

## Electrical Engineering.

## SECOND JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
E. E. 7 (S)	Principles of Electrical Engineering	4		5.
E. E. 16 (S)	Electrical Engineering Laboratory		9	6.
E. E. 13	Telephone Engineering	2		2.5
Ex. E. 1	Analytic Mechanics	3		3.75
Ex. E. 11	Structural Mechanics	2		2.5
Ex. E. 76 (S)	Power Plants	4		5.
M. L. 15	Spanish	6		7.5

## Second Term

E. E. 8	Principles of Electrical Engineering	6		7.5
E. E. 16-17	Electrical Engineering Laboratory		9	6.
Ex. E. 1	Analytic Mechanics	3		3.75
Ex. E. 11	Structural Mechanics	2		2.5
Ex. E. 54a	Calibration and Materials Lab'y		6	4.
Ex. E. 76	Power Plants	2		5.
M. L. 16	Spanish	6		7.5

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 71	Business Administration	1		2.
E. E. 9	Alternating Current Machinery	6		7.5
E. E. 18	Electrical Engineering Laboratory		9	6.
E. E. 11	Illumination and Photometry	4		5.
	Thesis			8.
Ex. E. 77	Heat Engines and Thermodynamics	4		5.
Ex. E. 71a	Fuels Laboratory		6	4.

## The Co-Operative Plan

## Second Term

Abbrev.	Subject	Rec. Hrs.		Lab. Hrs.		Eq'v.
Com. 72	Commercial Law	1				2.
E. E. 10	Alternating Current Machinery	6				7.5
E. E. 14	Electric Railways	4				5.
E. E. 18	Electrical Engineering Laboratory			9		6.
E. E. 30	Electrical Transmission of Power	6				7.5
	Thesis			8		4.
Ex. E. 84a	Engine Laboratory			6		4.
Ex. E. 80	Hydro-Electric Power Plants	4				5.

## Mechanical Engineering

## SECOND JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
E. E. 1 (S)	Dynamos and Motors	6		7.5
E. E. 3 (S)	Electrical Laboratory		9	6.
Ex. E. 21	Calibration Laboratory		3	3.
Ex. E. 76 (S)	Thermodynamics	4		5.
M. E. 23	Analytic Mechanics	3		3.75
M. E. 28	Mechanics and Materials	3		3.75
M. E. 46	Graphic Statics	2		2.5
M. L. 15	Spanish	6		7.5

## Second Term

Ex. E. 52	Materials Laboratory		8	4.
Ex. E. 71	Fuels Laboratory		6	3.
M. E. 24	Analytic Mechanics	3		3.75
M. E. 28	Mechanics of Materials	3		3.75
M. E. 35	Steam Engine	4		5.
M. E. 33	Engineering Problems	4		5.
M. E. 46	Graphic Statics	2		2.5
M. L. 16	Spanish	6		7.5

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 71	Business Administration	1		2.
Ex. E. 72	Steam Engine Laboratory		6	3.
M. E. 31	Mechanics of Materials	3		3.75
M. E. 35-36	Steam and Gas Engines	6		7.5
M. E. 39 (S)	Valve Gears	4		5.
M. E. 41	Designing		8	3.
M. E. 51	Shop Methods	1		2.5

## Second Term

Com. 72	Commercial Law	1		2.
Ex. E. 86a	Gas Engine Laboratory		6	3.
M. E. 36	Gas Engines	6		7.5
M. E. 42	Machine Design (Drawing)		6	6.
M. E. 44	Machine Design	6		7.5
M. E. 48	Steam and Water Turbines	4		5.
	Thesis			4.

**DEPARTMENT OF DRAWING**

PROFESSORS LOWNDES AND WEISS,  
MESSRS. SMITH AND PEEK.

**General Statement**

The aim of this department is to give the student a thorough grounding in the principles of drawing as used in the engineering world; to teach him the best draughtsman's methods of representing machinery and machine parts, together with the use of the customarily accepted conventions; and also to enable him to acquire that technique which makes possible neatness and accuracy without any sacrifice of time. Neatness in lettering is always stressed. The instruction in this department is by lecture, followed up by individual instruction, the instructors constantly passing from desk to desk and discussing with the students the work in hand.

**Equipment**

The Drawing Hall occupies the entire top floor of the Electrical Building. On this floor are three class-rooms, a blue print room, the drawing hall, and office. The hall is a spacious room, being some 60 by 90 feet, with windows on three sides and three skylights above, so that the light is most perfectly distributed. There are at present 124 individual desks, with rooms for some 20 more, which will soon be put in place. There are 12 drawing board cases, holding 40 boards each, a total of 480 boards.

Besides this, there are numbers of minor articles of equipment in daily use, such as special draughting instruments, odontographs, sets of tables, models of machine parts, books, and a cabinet of drawings, obtained from representative manufacturers.

Between each two windows, around three sides of the hall, is placed a glass covered bulletin board. On these boards are mounted such drawing as from time to time serve to illustrate such work as the student may have in hand.

**Tabulation of Subjects Taught in Drawing Department**

There are no degrees offered in this department. The work here being necessarily subordinate to the Senior work

in the different engineering courses, is outlined with special reference to the course the individual student intends to pursue.

**FRESHMAN YEAR***First Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 1	Freehand Drawing (All but Arch.)		3	3.
Dr. 2a	Desc. Geom. Recitations (Arch.)	3		7.5
Dr. 4a	Desc. Geom. Drawing (Arch.)		3	3.

*Second Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 2	(Chem. E. Ch., C. E., E. E., M. E.,)	3		7.5
Dr. 4	Desc. Geom. Recitations		3	3.
Dr. 6	Mechanical Drawing (T. E. only)		3	3.

**SOPHOMORE YEAR***First Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 13	(Chem., E. Ch., E. E., M. E., T. E., Co-ops.) Machine Drawing		3	3.

*Second Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 14	(E. E., E. Ch., M. E., T. E., Co-ops.) Machine Drawing		3	3.

**JUNIOR YEAR***First Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 21	Machine Drawing (M. E.)		3	3.
Dr. 23	Mechanism (E. E., M. E., T. E., Co-ops.)	4		10.

*Second Term*

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equiv.
Dr. 22	Kinematic Drawing (Same as Dr. 23)		3	3.

**Courses of Instruction****Drawing 1. Free Hand Drawing.**

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Freshman, first term, three hours.

The object of this course is to teach correct forms and to give the student considerable practice in plain free-hand lettering. In addition to the work in lettering a



number of plates of geometric figures are drawn. This drawing gives the student skill in the use of the pencil, stimulates his sense of proportion, and teaches him a close observation of detail. All work is strictly freehand, no other instrument than a pencil being used.

#### Drawing 2a and 2. Descriptive Geometry.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Drawing 2a. Freshmen in Arch., first term, three hours.

Drawing 2. Freshmen in Chem., E. Ch., E. E., C. E., and M. E., second term, three hours.

This work is carried on both from a text book and from notes and lectures. The subject is presented in such a way as to enable the student to make use of it in the practical solution of problems in drawing and to give the Architectural students, especially, a familiarity with conventional shades and shadows.

Text: *Faunce's "Descriptive Geometry."*

#### Drawing 4a and 4. Descriptive Geometry Drawing.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Drawing 4a. Freshmen in Arch., first term, three hours.

Drawing 4. Freshmen in Chem., E. Ch., E. E., C. E., and M. E., second term, three hours.

This course is devoted to the solution of problems on the drawing board. This course is so arranged as to be parallel with the recitation work, and the problems are drawn from notes. There are no partly finished drawings furnished the students. Most of the work is done in the first and third angles, and the profile plane is freely used.

#### Drawing 6. Elementary Mechanical Drawing.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Freshmen in T. E., second term, three hours.

In this course practically the same object is attained

as in Course D. 4. Here the student is taught the use of the three standard projections, (elevation, plan and profile), together with the use of these in solving graphical problems involving three dimensions. He is also taught the use of the Isometric and other pseudo perspectives; and it is through their medium that he is introduced to the three co-ordinate planes of orthographic projections.

#### Drawing 13. Machine Drawing to Scale.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Sophomores in Chem. E. Ch., M. E., E. E., T. E., and Co-ops., first term, three hours.

In this course the student is taught the correct methods of making working drawings of machinery and machine parts, both assembled and detailed. All dimensions are given and carefully checked over, so that the student is made to appreciate the methods in common practice in the modern manufacturing shops.

Text: *Anthony's "Machine Drawing."*

#### Drawing 14. Machine Drawing to Scale.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Sophomores in E. Ch., M. E., E. E., T. E., and Co-ops., second term, three hours.

A continuation of Drawing 13.

#### Drawing 21. Machine Drawing to Scale.

*Professors Lowndes and Weiss, Messrs. Smith and Peek.*

Juniors in M. E., first term, three hours.

A continuation of Drawing 14. In addition to the text book, he uses certain special drawings and notes.

#### Drawing 22. Kinematic Drawing.

*Professors Lowndes and Weiss and Mr. Smith.*  
Prerequisite, Dr. 23.

Juniors in E. E., M. E., and T. E., second term, three hours.

This course is an application of the principles of mechanism to the laying out of spur and bevel gears of cycloidal and involute types, as well as types of approximate tooth outlines; and the laying out of cams of various kinds and helical gears; and the drawing of velocity acceleration, rotative, effort, deflection and other curves.

**Drawing 23. Kinematics or Mechanism.**

*Professors Lowndes and Weiss and Mr. Smith.*

Prerequisites, Math. 21 and Math. 25.

Juniors in E. E., M. E., and T. E., first term, four hours.

The principal aim of this study is to teach the student correct methods of analyzing machinery and machine motions, and to give him certain of the well-founded principles upon which certain classes of machinery are constructed. It teaches him the application of mathematics to the solution of machine problems, and gives him a familiarity with pure mechanism. A part of this course is given up to the proper construction of gears, and to the practical methods in common use of approximating gear tooth outlines.

Text: *Sthal and Woods*, "Elementary Mechanism."

## DEPARTMENT OF ELECTRICAL ENGINEERING

PROFESSORS ELDRED AND TANZER, AND MR. PHILLIPS.

### General Statement.

The Electrical Engineering Department has for its object the training of young men to be industrious and clear thinking, and to equip them with the scientific and practical knowledge necessary for the successful practice of their profession as Electrical Engineers.

The course of study is planned to give comprehensive training in the fundamental sciences of Chemistry, Physics, Mathematics and Applied Mechanics. Adequate training is also given in the scientific and applied aspects of the several important branches of engineering other than Electrical, such as Constructive Materials, Steam Engineering, Hydraulics and Hydraulic Machinery.

The electrical subjects are so planned as to give thorough instruction in the fundamental underlying principles of the various branches of applied electricity. During the senior year some of the more important applications of electricity are included in the course of study with a view to showing the application of the principles rather than attempting to produce specialists in that particular branch.

Parallel with the theoretical work are carefully planned laboratory courses beginning with the first year in Chemistry and continuing throughout the four years in the various sciences and engineering branches studied. The laboratory work is so conducted as to enable the student to verify theory in the performance of fundamental experiments, and to develop in the student the powers of accurate observation and initiative.

### Equipment.

The lecture rooms and laboratory of the Electrical Engineering Department are on the second floor of the Electrical Building. The laboratory is at present supplied with 60-cycle alternating current, and direct current is obtained from a 17.5-kilowatt compound generator driven by a 25-horse power induction motor.

The laboratory contains the following apparatus: a 25-kilowatt split-pole double-current generator, and a 10-kilowatt double-current generator, both built in the School Shops and capable of supplying continuous or polyphase currents; a number of shunt and compound continuous current generators and motors; two 5-kilowatt three-phase alternators or synchronous motors; two 5-horsepower three-phase induction motors: one single-phase induction motor; a 2-kilowatt booster set for continuous currents; a 2-kilowatt induction regulator for alternating currents; a ten light series arc light generator; two 3-kilowatt transformers arranged for phase transformation; a constant-current transformer; three transformers arranged for star and delta connection on three-phase and six-phase circuits; one 30,000-volt transformer for making puncture tests on insulating material; a mercury arc rectifier; condensers aggregating several hundred microfarads capacity; a 130 volt storage battery for testing purposes; and electrical measuring instruments, prony brakes, spring balances, rheostats



and other pieces of laboratory apparatus necessary for the convenient and accurate performance of the usual laboratory experiments.

A Kelvin hekto-ampere balance and a potentiometer with certified resistances and a standard cell are a portion of the apparatus available for calibration work.

The photometer room is equipped with a Lummer-Brodhun screen; a Sharp-Miller illuminometer for determining the illumination of streets and buildings, and a 72-inch Globe Photometer.

An important part of the laboratory apparatus is an oscillograph equipped with two measuring loops and used for the observation of current and voltage wave forms and their phase displacement. This machine is also equipped for observing transient phenomena due to disturbances on transmission line, or the phenomena which attend the growth or decay of currents in circuits at the time of closing or opening the switch supplying that circuit.

The laboratory also contains a model of the common battery telephone exchange arranged for convenient inspection and testing.

### Two-Year Special Electrical Course

This course is intended for those who have had experience in electrical work, and particularly for those men who by reason of age, responsibilities, etc., can not afford the time or the money to take the regular four-year course. The course is as complete as is possible to make it in two years and constitutes an ample preparation for a large number of positions in the electrical industries. It is by no means the equivalent of the regular course and all those who can are urged to take the four-year rather than this shorter course.

It is expected that the candidates for a certificate in this course will have had experience in shops, and the practical instruction is consequently confined to the laboratories and the drawing rooms. In addition to the instruction given in electrical subjects, the student is given a thorough training in Mathematics so that he can pursue his studies after completing the work of the course. Some training is also given in Chemistry, Physics, English, and in Steam and Hydraulic Engineering.

The number of students entering the course each year is limited to twenty-five. Fourteen units of high school work are required for admission to the course, the same as for the regular course, exception being made only in the case of mature applicants who can convince those in charge of the registration that their preparation is sufficient to carry the work without being a hindrance to the progress of the remainder of the class. Those who are not fully prepared, especially in Algebra, are advised to consider a course in the Summer School (a description of which is to be found elsewhere in this Catalogue), immediately prior to entering college in the fall, so as to be more fully prepared for the first year's work.

### The Course in Electrical Engineering

#### FRESHMAN YEAR

##### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3a	Wood Shop		6	6.
M. E. 5 or 7	Smithy (or Foundry)		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

##### Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Math. 18	Analytic Geometry	5		12.5
M. E. 4	Wood Shop		3	3.
M. E. 7a or 5	Foundry (or Smithy)		3	3.
Mil. 2	Military Instruction		3	3.
Total..		15	14	50.

## Georgia School of Technology

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 9	Qualitative Analysis (Electrive for 4 hrs. M. E. 11)		4	4.5
Dr. 13	Machine Drawing		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			
Geol. 1	Ferrous Metallurgy (or C. E. 1)	2		5.
Math. 21	Analytic Geometry	2		5.
Math. 25	Calculus	3		7.5
M. E. 11	Mch. Sh'p (4 hrs. El'c. for Ch'm. 9)		6	3 or 6
Phys. 9	Physics	4		10.
Mil. 3	Military Instruction		3	3.
Total..		14	16	48.5

## Second Term

Chem. 10	Qualitative Analysis (Elective for 4 hours M. E. 12)		4	4.5
C. E. 1a	Plane Surveying (or Geol. 1a)	1	3	5.
Dr. 14	Machine Drawing		3	3.
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading			
Math. 26	Calculus	5		12.5
M. E. 12	Mach. Sh'p. (4 hrs. El'c. for Ch'm. 10)		6	3 or 6
Phys. 10	Physics	4		10.
Phys. 14	Physics Laboratory		3	4.
Phys. 20	Slide Rule		3	5.
Mil. 4	Military Instruction		3	3.
Total..		13	22.5	53.

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Dr. 23	Kinematics or Mechanism	3		7.5
E. E. 7	Principles of Electrical Engineering	2		5.
Eng. 31	English Literature	3		7.5
Eng. 35	Literary Thesis			
Ex. E. 1	Anlytic Mechanics	3		7.5
Ex. E. 11	Structural Mechanics	2		5.
M. L. 1	German	3		7.5
M. L. 7	French			
M. L. 13	Spanish			
Phys. 11	Physics	3		7.5
Phys. 15	Physics Laboratory		3	4.
Phys. 17	Physics Laboratory		1.5	2.
Mil. 5	Military Instruction		3	3.
Total..		19	7.5	56.5

## Second Term

Dr. 22	Machine Drawing		3	3.
E. E. 8	Principles of Electrical Engineering	5		12.5
E. E. 16	Electrical Engineering Laboratory		6	8.
Eng. 32	English Literature	3		7.5
Eng. 36	Literary Thesis			
Ex. E. 76	Power Plants	2		5.
Ex. E. 54	Calibration and Materials Lab'y.		3	4.
Math. 35a	Differential Equations	2		5.
M. L. 2	German	3		7.5
M. L. 8	French			
M. L. 14	Spanish			
Mil. 6	Military Instruction		3	3.
Total..		15	15	55.5

## Department of Electrical Engineering

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
C. E. 15	Hydraulics	3		7.5
Com. 1	Business Organization & Managem't	1		2.
E. E. 9	Alternating Current Machinery	5		12.5
E. E. 11	Illumination and Photometry	2		5.
E. E. 13	Telephone Engineering	1		2.5
E. E. 17	Electrical Engineering Laboratory		6	8.
Ex. E. 71	Fuels Laboratory		3	4.
Ex. E. 77	Heat Engines and Thermodynamics	3		7.5
M. L. 3	German	3		6.
M. L. 9	French			
M. L. 15	Spanish			
Mil. 7	Military Instruction		3	3.
Total..		18	12	58.

## Second Term

Com. 2	Commercial Law	1		2.
E. E. 10	Alternating Current Machinery	5		12.5
E. E. 14	Electric Railways	2		5.
E. E. 18	Electrical Engineering Laboratory		6	8.
E. E. 20	Thesis			6.
E. E. 30	Electrical Transmission of Power	3		7.5
Ex. E. 80	Hydro-Electric Power Plants	2		5.
Ex. E. 84	Engine Laboratory		3	4.
M. L. 4	German	3		6.
M. L. 10	French			
M. L. 16	Spanish			
Mil. 8	Military Instruction		3	3.
Total..		16	12	59.

## Two-Year Special Electrical Course

## FIRST YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Math. 15	Trigonometry	3		7.5
Math. 19	Analytic Geometry	3		7.5
Phys. 5	Physics	3		7.5
Phys. 7	Physics Laboratory		3	4.
Phys. 7	Rhetoric	3		7.5
Eng. 11	Theme Writing	1		1.
Eng. 15	Free Hand Drawing		3	3.
Dr. 1				
Total..		16	8	47.5

## Second Term

Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Math. 20	Analytic Geometry	3		7.5
Math. 25	Differential Calculus	3		7.5
Phys. 6	Physics	3		7.5
Phys. 8	Physics Laboratory		3	4.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Dr. 6	Elm. Mechanical Drawing		7	7.
Total..		16	12	51.5



## SUMMER

E. E. 7-8	Principles of Electrical Engineering, 12 hours per week for 4 weeks, 3 hours per week for 8 weeks.
E. E. 16	Electrical Engineering Laboratory, 12 hours per week for 4 weeks, 8 hours per week for 8 weeks.
Math. 26	Integral Calculus, 10 hours per week for 8 weeks.

## SECOND YEAR

## First Term

Abbrev.	Subject	Hrs. Per Wk	Class	Lab'y	Equv.
E. E. 9	Alternating Current Machinery	5			12.5
E. E. 11	Illumination and Photometry	2			5.
E. E. 13	Telephone Engineering	1			2.5
E. E. 17	Electrical Engineering Laboratory		6		8.
Ex. E. 1	Analytic Mechanics	3			7.5
Ex. E. 11	Structural Mechanics	2			5.
E. E. 21	Electrical Problems			4	4.
Total..		13		10	44.5

## Second Term

E. E. 10	Alternating Current Machinery	5			12.5
E. E. 14	Electric Railways	2			5.
E. E. 18	Electrical Engineering Laboratory		6		8.
E. E. 22	Electrical Problems		4		4.
E. E. 24	Electric Power Plants	3			7.5
C. E. 15a	Hydraulics	3			7.5
Total..		13		10	44.5

## Courses of Instruction

## E. E. 2. Applied Electricity.

*Professor Tanzer.*

Prerequisite, Physics 11 (Physics 6 for T. E. Seniors). Parallel E. E. 3a.

Senior C. E., E. Ch., and T. E., second term, two hours.

A course of recitations covering the fundamental principles and characteristics of direct and alternating current machines.

## E. E. 3 and 3a. Electrical Engineering Laboratory.

*Professor Tanzer and Mr. Phillips.*

Parallel E. E. 2 and E. E. 5.

E. E. 3. Senior M. E., first term, three hours.

E. E. 3 a. Senior C. E., E. Ch., and T. E., second term, three hours.

A course consisting of the experimental determination of the characteristics, efficiency and regulation, of direct

and alternating current machines. A written report is required on each experiment covering the method of procedure and the results obtained.

## E. E. 4. Applied Electricity.

*Professor Tanzer.*

Prerequisite, Physics 11.

Junior M. E., second term, two hours.

A course covering the principles and the industrial applications of direct current apparatus and machines.

## E. E. 5. Applied Electricity.

*Professor Tanzer.*

Prerequisite, E. E. 4. Parallel, E. E. 3.

Senior M. E., first term, two hours.

A continuation of E. E. 4 devoted to the study of the principles and the industrial applications of alternating current apparatus and machines.

## E. E. 7. Principles of Electrical Engineering.

*Professor Eldred.*

Prerequisites, Physics 11 and Math. 26.

Junior E. E., first term, two hours.

A course devoted to the study of the laws and properties of electric and magnetic circuits, and the elementary principles of the construction of direct-current machines.

## E. E. 8. Principles of Electrical Engineering.

*Professor Eldred and Mr. Phillips.*

Prerequisite, E. E. 7. Parallel, E. E. 16.

Junior E. E., second term, five hours.

A continuation of E. E. 7 and consisting of recitation and problem work devoted to the principles of construction and performance of direct-current machinery. The latter part of this course is given to the study of variable currents and alternating-current circuits.

**E. E. 9. Alternating Current Machinery.**

*Professor Eldred and Mr. Phillips.*

Prerequisite, E. E. 8. Parallel, E. E. 17.

Senior E. E., first term, five hours.

A course consisting of recitations and problem work devoted to the study of single and polyphase systems and the construction and the operating characteristics of the static transformer and the synchronous generator.

**E. E. 10. Alternating Current Machinery.**

*Professor Eldred and Mr. Phillips.*

Prerequisite, E. E. 9. Parallel, E. E. 18.

Senior E. E., second term, five hours.

A continuation of E. E. 9, and consisting of recitations and problem work devoted to the study of the construction and the operating characteristics of polyphase and single-phase motors and rotary converters.

**E. E. 11. Illumination and Photometry.**

*Professor Tanzer.*

Senior E. E., first term, two hours. Parallel, E. E. 9.

A course of recitations devoted to the study of the production, measurement and utilization of light, including the fundamental principles involved in efficient and economical illumination.

**E. E. 13. Telephone Engineering.**

*Mr. Phillips.*

Senior E. E., first term, one hour. Parallel, E. E. 9.

A course consisting of recitations and laboratory work. The recitations are devoted to the study of the principles and construction of telephone and telegraph apparatus and its application in modern systems. The laboratory work consists of inspection and testing on the model telephone exchange.

**E. E. 14. Electric Railways.**

*Professor Tanzer.*

Senior E. E., second term, two hours. Parallel, 1. 1. 10.

A course consisting of recitations and problem work

devoted to the study of modern electric traction covering construction, equipment and operation of the different types of roads.

**E. E. 16. Electrical Engineering Laboratory.**

*Professor Tanzer and Mr. Phillips.*

Junior E. E., second term, six hours. Parallel, E. E. 8.

A course consisting of the experimental determination of the characteristics, efficiency and regulation of direct current generators and motors. A preliminary report written in class at certain assigned hours is required on each experiment as well as a final report covering in detail the results and conclusions derived from the experiment.

**E. E. 17. Electrical Engineering Laboratory.**

*Professor Tanzer and Mr. Phillips.*

Senior E. E., first term, six hours. Parallel, E. E. 9.

A course consisting of experiments on single and three-phase circuits and the characteristics, efficiency and regulation of transformers and synchronous generators. A preliminary report written in class at certain assigned hours is required on each experiment as well as a final report covering in detail the results and conclusions derived from the experiment.

**E. E. 18. Electrical Engineering Laboratory.**

*Professor Tanzer and Mr. Phillips.*

Senior E. E., second term, six hours. Parallel, E. E. 10.

A course consisting of the experimental determination of the characteristics, efficiency and regulation of polyphase and single-phase motors and rotary converters. A preliminary report written in class at certain assigned hours is required on each experiment as well as a final report covering in detail the results and conclusions derived from the experiment.

**E. E. 20. Thesis.**

*Professors Eldred and Tanzer.*

Senior E. E., second term, six hours.

A thesis along some special line of investigation is required from each student before graduation. The design



and construction of some special apparatus, or complete tests of a small power plant or of machinery are usually acceptable. Thesis subjects must be approved by the Department. Each student has an individual thesis unless the nature of the work is such that the simultaneous efforts of more than one man are required.

**E. E. 21. Electrical Problems.**

*Professor Eldred and Mr. Phillips.*

Parallel, E. E. 9.

Second year, Special Electrical, first term, four hours.

This course is devoted to the solution of special problems on direct and alternating current circuits and machines under the direction of an instructor.

**E. E. 22. Electrical Problems.**

*Professor Eldred and Mr. Phillips.*

Parallel, E. E. 10.

Second Year, Special Electrical, second term, four hours.

This course is similar to E. E. 21.

**E. E. 24. Electric Power Plants.**

*Professor Tanzer.*

Parallel, E. E. 10.

Second Year, Special Electrical, second term, three hours.

This course is devoted to the study of the characteristics and performance of all types of apparatus entering into a modern electric power plant, including boilers, steam engines, steam turbines, gas and oil engines, condensers, economizers, etc., as well as to the strictly electrical apparatus.

**E. E. 30. Electrical Transmission of Power.**

*Professor Eldred and Mr. Phillips.*

Parallel, E. E. 10.

Senior E. E., second term, three hours.

A course consisting of recitation and problem work devoted to the study of the construction and the operating characteristics of transmission lines, and the distribution of power.

**DEPARTMENT OF ENGLISH**

PROFESSORS WALLACE AND PERRY; MESSRS. ARMSTRONG, MCKEE, FARRIS, AND LASLEY.

**General Statement**

The course in English begins with the Freshman class, and extends through the Junior class, a period of three years.

The work of the department is required of all regular students, and its importance as the avenue of approach to all knowledge is kept constantly in mind. Particularly is its value to technical students recognized and enforced; first, as supplying the engineer with that equipment of direct, accurate, and vigorous expression necessary to his success in life; and second, as co-ordinating with his scientific training the equally important cultural development which is justly demanded of the educated man today.

The purposes of the course are utility, which predominates in the first year and in half of the second; and culture, which is the chief end sought as the student progresses in his work. It is to be recognized and stressed, however, that both purposes are considered fundamental and correlative, and are earnestly sought from beginning to end of the course.

**Courses of Instruction**

**English 11. Composition and Rhetoric.**

*Professors Wallace and Perry; Messrs. Armstrong, McKee, Farris, and Lasley.*

Freshman, first term, three hours.

This course consists, primarily, of a careful study and application of Rhetorical principles, including the structure of the paragraph and the sentence, a correct and effective use of words, punctuation, letter-writing, and forms of discourse. The subject of composition is considered entirely from the point of view of construction, and constant effort is made to bring the student to apply in his own compositions the principles that are studied in the classroom. Composition work during the first term

is devoted mainly to Description and Narration. The work in this course is closely adjusted to that in English 15.

Text-books: *Boynton's* "Principles of Composition"; *Penniman's* "Common Words Difficult to Spell;" the "Literary Digest"; various classics; and an approved dictionary.

#### English 12. Composition and Rhetoric.

*Professors Wallace and Perry; Messrs. Armstrong, McKee, Farris, and Lasley.*

Freshman, second term, three hours.

This course is in a large measure a continuation of English 11. The composition work of this term, however, is devoted mainly to Exposition. Some effort is also made to approach the study of Rhetoric from the standpoint of appreciation. The student is made familiar with fundamental principles of literary criticism, and illustration of these principles is sought in the simpler classics of English prose and poetry and in current literature.

Text-books: *Boynton's* "Principles of Composition"; the "Atlantic Monthly"; various classics; reference to books in the library.

#### English 15. Theme-Writing and Speaking.

*Messrs. McKee, Farris, and Lasley.*

Freshman, first term, one hour.

The aim of this course is to teach correctness and clearness in the expression of thought, and to stimulate the powers of observation, imagination, and reflection in the student. Sixteen themes on assigned topics are required of the student during the term, and attendance upon a consultation with the instructor one hour a week. No theme is accepted which is notably defective in grammar or spelling, and no student will be allowed to pass the course until he has acquired correctness in these particulars and reasonable facility in the application of rhetorical principles.

#### English 16. Theme-Writing and Speaking.

*Messrs. McKee, Farris, and Lasley.*

Freshman, second term, one hour.

This course is a continuation of English 15. Fewer and longer themes are required. The use of the library, outline making, thought organization, and oral presentation of thought are taught. The weekly consultations are continued.

At the close of the year a contest is held in which a gold medal is offered for excellence in the preparation and delivery of orations. Students will be qualified to enter this contest by the general excellence of their work in this course.

Courses 15 and 16 may be completed in one year; but, if the student fails to pass the work satisfactorily, he may be required to repeat it as often as is necessary until he is able to write correctly. Students in more advanced courses whose work in composition is unsatisfactory will be required to take this course in whole or in part.

#### English 21. American Literature.

*Professors Wallace and Perry; Messrs. Armstrong, McKee, and Farris.*

Sophomore, first term, three hours.

This course consists of a brief review of the history of American literature, essays, lectures, and quizzes. Representative works of *Irving, Bryant, Longfellow, Lowell, Emerson, Hawthorne, Holmes, Whitman, Poe, and Lanier* are subjected to careful analysis and interpretation. The aim of this course is to give the student an appreciation of the meaning and worth of the literature of America; to familiarize him with the masterpieces of American writers; and to cultivate in him a sound critical faculty.

Text-books: *Page's* "Chief American Poets," and various classics; *Long's* "English and American Literature."



## English 24. Economics.

*Professors Wallace and Perry; Messrs. Armstrong, McKee, and Lasley.*

Sophomore, second term, three hours.

As the School has no department of political or social science, a brief course in Economics is given by the English Department. *Ely's* "Outline of Economics" is used as a text-book, supplemented by lectures, papers upon various economic subjects, and discussions. The aim of the course is to familiarize the student with economic theories, to indicate the laws underlying the complex fabric of modern commercial and social systems, and to give him an intelligent apprehension of the nature and meaning of the great economic problems of the age. An essay on some approved economic subject is required of each student.

Text-book: *Ely's* "Outlines of Economics."

## English 27-28. Parallel Reading.

*Professors Wallace and Perry; Messrs. Armstrong, McKee, Farris, and Lasley.*

Sophomore, both terms, not scheduled.

During the entire Sophomore year a reading course in American fiction is required as supplementary to English 21. The books are selected for their interest and worth; and in this way, it is hoped that the student may acquire a taste for good literature.

Text-books: As the books read vary from year to year, they are announced at the beginning of the course. All books necessary for this course are supplied by the school library.

## English 31. English Literature.

*Professors Wallace and Perry; Mr. Armstrong.*

Junior, first term, three hours.

The course in English Literature, given throughout the Junior year, offers a study of literature itself rather than of texts about literature. It recognizes that a literary work is not merely a work of art, but an expression of the personality of its author, and through him, as

the voice and exponent of his age, a record of the ideas and ideals of a section of the nation's life. Certain dominant men of letters are chosen as representatives of important literary periods, and, as far as opportunity offers, their work is studied intensively. A simple handbook of literary history is used for reference, and occasional reports on the part of the student are called for. The student is also expected to supplement the lectures by reference to the body of criticism which is placed at his disposal in the library and to which he is referred. The course is conducted by lectures, oral and written quizzes, and written reports.

The writers studied during the first term are Milton and Shakespeare.

Text-books: *Milton's* Poems (complete); *Long's* "English and American Literature;" selected plays of Shakespeare.

## English 32. English Literature.

*Professors Wallace and Perry; Mr. Armstrong.*

Prerequisite, English 31.

Junior, second term, three hours.

This course, which is a continuation of English 31, is similar in aim and scope to the preceding course.

The writers studied during the second term are *Wordsworth*, *Tennyson* and *Browning*.

Text-books: *Henry Van Dyke's* Selections from the Poems of *Tennyson* (Athenaeum Press Series); *Edward Dowden's* Selections from *Wordsworth's* Poems (Athenaeum Series); *Robert Browning*, (Pocket Classics); *Long's* "English and American Literature."

## English 35-36. Literary Thesis.

*Professors Wallace and Perry; Mr. Armstrong.*

Junior, first and second terms, not scheduled.

Each member of the Junior class is required to prepare several critical essays or reports each term, the subjects for treatment being the work of one of the greater English essayists, as assigned. Unsatisfactory essays will be returned for thorough revision; and failure to sat-

isfy the instructor in this respect denies to the writer the privilege of taking the final examination in English Literature or of receiving credit for the course.

Text-books: The school library supplies all material necessary for the course.

## DEPARTMENT OF EXPERIMENTAL ENGINEERING

PROFESSORS KING, VALLANCE AND HOWELL, AND MR. I. H. TILLMAN.

### General Statement

The object of courses in this department is to enable the engineering student to recognize and apply such natural forces and materials as are adapted to his uses.

In order that he may be capable of intelligently and skillfully designing, constructing and supervising all kinds of machinery, it is necessary that he should pursue thorough and extensive theoretical courses which are of primary importance in according mental discipline not to be derived from practical research. The latter is made to go hand in hand with the former, for it is believed that, from continued practical applications of theoretical conclusions, a broader and more tangible conception of their truths may be derived. It is not, then, at the expense of the abstract mathematical law that time is given to show how it may be involved in the construction of the simplest machine, for not only is a new and suggestive meaning thereby given to the various contrivances of the mechanism, but an insight into the whole significance of the law itself is gained, which can be acquired only by observing practical applications.

To explain theoretical principles, however, is not the only value of the experimental work of the department. If the student desires to go from college to the manufacturing world, it is essential that he should be familiar with working machines, methods of management, and as much of the every-day detail of engineering work as it is possible for him to acquire as a supplement to his higher training.

## Courses in Experimental Engineering

### SOPHOMORE YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Ex. E. 9	Elem. Applied Mechanics (T. E.)	3		7.5

#### Second Term

Ex. E. 48	Elem. Materials Laboratory (T. E.)		3	4.
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### JUNIOR YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Ex. E. 1	Analytic Mechanics (E. E.)	3		7.5
Ex. E. 1	Analytic Mechanics (E. E. Co-op.)	3		3.75
Ex. E. 7	Elementary Mechanics and Strength of Materials (I. E.)	3		7.5
Ex. E. 11	Structural Mechanics (E. E.)	2		5.
Ex. E. 11	Structural Mechanics (E. E. Co-op.)	2		2.5
Ex. E. 21	Calibration Laboratory (M. E., M. E. Co-op.)		3	4.
Ex. E. 41	Hydraulic Laboratory (C. E.)		3	4.
Ex. E. 47	Elem. Materials Laboratory (I. E.)		3	4.

#### Second Term

Ex. E. 1	Analytic Mechanics (E. E. Co-op.)	3		3.75
Ex. E. 1a	Analytic Mechanics (C. E.)	3		7.5
Ex. E. 11	Structural Mechanics (E. E. Co-op.)	2		2.5
Ex. E. 11a	Structural Mechanics (Arch., E. Ch.)	2		5.
Ex. E. 11b	Structural Mechanics (C. E.)	3		7.5
Ex. E. 52	Hydraulic and Materials Laboratory (M. E.)		3	4.
Ex. E. 54	Calibration and Materials Laboratory (E. E.)		3	4.
Ex. E. 54a	Calibration and Materials Laboratory (E. E. Co-op.)		6	4.
Ex. E. 71	Fuels Laboratory (M. E. Co-op.)		6	4.
Ex. E. 76	Power Plants (M. E., E. E., E. Ch., E. E. Co-op.)	2		5.

### SENIOR YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Ex. E. 1a	Analytic Mechanics (E. Ch.)	3		7.5
Ex. E. 15	Power Plant Operation (I. E.)	1	3	6.5
Ex. E. 57	Materials Laboratory (C. E.)		3	4.
Ex. E. 71	Fuels Laboratory (M. E., E. E.)		3	4.
Ex. E. 72	Steam Engine Lab'y. (M. E. Co-op.)		6	4.
Ex. E. 73	Elementary Steam Lab'y. (C. E., E. Ch., T. E.)		3	4.
Ex. E. 77	Heat Engines and Thermodynamics (E. E., C. E., E. Ch., T. E.)	3		7.5
Ex. E. 77a	Heat Engines and Thermodynamics (E. E. Co-op.)	4		5.
Ex. E. 71a	Fuels Laboratory (E. E. Co-op.)		6	4.



Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Ex. E. 72	Steam Engine Laboratory (M. E.)		3	4.
Ex. E. 74	Fuels and Gas Engine Laboratory (E. Ch., T. E.)		3	4.
Ex. E. 78	Advanced Heat Engines and Thermodynamics (E. Ch., T. E.)	2		5.
Ex. E. 80	Hydro-Electric Power Plants (E. E., E. E. Co-op.)	2		5.
Ex. E. 84	Engine Laboratory (E. E.)		3	4.
Ex. E. 86	Gas Engine Laboratory (M. E., M. E. Co-op.)		3	4.
Ex. E. 84a	Engine Laboratory (E. E. Co-op.)		6	4.

**Courses of Instruction.****Ex. E. 1 and 1a. Analytic Mechanics.**

Prerequisite, Math. 26-28.

Ex. E. 1. Juniors in E. E., first term, three hours.

Ex. E. 1a. Juniors in C. E., second term, three hours.  
Seniors in E. Ch., first term, three hours.

Ex. E. 1. Juniors in E. E. Co-op. course, three hours alternate two weeks, first and second terms.

A course in the fundamental principles of mechanics treated with especial reference to engineering problems. The first part of the term is devoted to Statics, developing the algebraic and graphical solutions of problems. In the treatment of the theory of centroids and centers of gravity it is developed both with and without the use of the Calculus.

Under Kinematics, are treated the properties of displacement, velocity and acceleration; rectilinear and curvilinear motion of a particle, giving the graphical interpretation of position displacement, velocity, acceleration and time relations, and motion of a rigid body in translation and rotation.

Under Dynamics (motion and force) are considered the laws of motion, motion under the action of a variable force or in a resisting medium, constrained motion, impact work, energy, moment of inertia, D'Alembert's principle applied to translatory and rotary motion, and the motion of the mass center of any system of particles.

Text-book used 1917-1918, *Hancock's Applied Mechanics for Engineers* by Riggs.

**Ex. E. 7. Elementary Mechanics and Strength of Materials.**

Seniors in Industrial Education, first term, three hours.

This course covers the following items: Practical ap-

plications of forces and moments, forces in simple framed structures, friction and lubrication, power, transmission of motion and power, resultant and component forces, the elastic law, strength and stiffness of materials, bending, torsion, working stresses in materials and standard specifications. This course is not open to regular engineering students.

**Ex. E. 9. Elementary Applied Mechanics.**

Sophomores in T. E., first term, three hours.

A course in Applied Mechanics for Textile Engineering students. This course covers the subjects of forces and moments, their practical applications; effort, friction and efficiency of simple machines; power; transmission of motion and power by belting, gearing, etc.; strength of materials; working stresses; momentum, inertia and force; various motions; hydraulics, etc.

Text book *Elementary Applied Mechanics* by *Morley and Inchley*.

**Ex. E. 11 and 11a. Structural Mechanics.**

Prerequisite, Mathematics 26-28.

Ex. E. 11. Juniors in E. E., first term, two hours.

Seniors in E. E. Co-op. course, alternate two weeks, first and second terms, two hours.

Ex. E. 11a. Juniors in Arch. and E. Ch., second term, two hours.

Ex. E. 11b. Juniors in C. E., second term, three hours.

This course is devoted to the strength and deflection of beams; pieces under tension and compression; columns, posts, and struts; safe working stresses; rivets, pins, and plate girders.

Text-book used in 1917-1918, *Strength of Materials* by *Boyd*.

**Ex. E. 15. Power Plant Operation.**

Seniors in Industrial Education, first term, one hour recitation and lecture and four hours laboratory.

This is an abridged course in power plant operation and is intended to give the student a working knowledge of the operation of small power plants and the care of the

apparatus usually encountered in such plants. The theory of operation is given in the class room and is followed by practical work and demonstration in the laboratory. This course is not open to regular engineering students.

**Ex. E. 21. Calibration Laboratory.**

Juniors in M. E., and M. E. Co-op, first term, four hours.

This course covers the calibration of steam gauges and other pressure measuring devices, thermometers, indicator springs, reducing motions, and planimeters. The use of the steam engine indicator. The testing of lubricating oils and greases.

**Ex. E. 41. Hydraulic Laboratory.**

Juniors in C. E., first term, four hours.

The calibration of nozzles and orifices, weirs, water meters of different types, pitot tubes, etc., the testing of pelton water wheels, hydraulic rams, centrifugal pumps, steam pumps, pulsometer, and flow of water in pipes are some of the subjects covered by this course.

**Ex. E. 47. Elementary Materials Laboratory.**

Juniors in Industrial Education, first term, four hours.

This course covers the commercial testing of structural materials. All materials are tested according to standard specifications, and particular stress is laid on the commercial application of such tests. The work covers the testing of cement, concrete, structural steel, timber, riveted joints, rope, cable, etc. This course is not open to regular engineering students.

**Ex. E. 48. Elementary Materials Laboratory.**

Sophomores in T. E., second term, four hours.

A course designed especially for Textile students and covers in addition to regular commercial testing of materials the testing of materials of special use to the textile engineer.

**Ex. E. 52. Hydraulics and Materials Laboratory.**

Juniors in M. E., M. E. Co-op., second term, four hours. The work covered in this course embraces the testing

and calibration of orifices, nozzles, weirs, water meters, pelton wheel, centrifugal pump, etc., and the testing of the strength of materials in tension, compression, cross bending, torsion and shear. Complete tests of cement are made.

**Ex. E. 54. Calibration and Materials Laboratory.**

Juniors in E. E., Co-op., second term, four hours.

Juniors in E. E., second term, four hours.

This course is a combination of courses 21 and 57. The calibration of steam gauges, thermometers and indicator springs, tests of lubricants and the testing of materials in tension, compression, torsion, and cross bending are given in this course. The testing of cement and concrete is also included.

**Ex. E. 57. Materials Laboratory.**

Seniors in C. E., first term, four hours.

This course covers the testing of cement and concrete, the strength of materials in tension, compression, torsion, shear, cross-bending, riveted joints and the commercial tests of structural materials.

**Ex. E. 71. Fuels Laboratory.**

Seniors in M. E., and E. E., first term, four hours.

Juniors in M. E. Co-op., second term, four hours.

This course embraces the determination of the calorific values of fuel, proximate analysis of fuels, sulphur determinations, flue gas analysis, steam calorimetry, tests of injectors, boilers and ventilating fans.

**Ex. E. 72. Steam Engine Laboratory.**

Seniors in M. E., second term, four hours.

Seniors in M. E. Co-op., first term, four hours.

This course includes valve setting, economy tests of steam engines, entropy analysis of steam engines, pulsometer, refrigerating machines, air compressors and the use of dynamometers.

**Ex. E. 73. Elementary Steam Laboratory.**

Seniors in C. E., E. Ch., T. E., first term, four hours.

This is an abridged course in the steam engine labora-



tory and covers the testing of steam gauges, lubricating oils, valve setting, engine testing, flue gas analysis and boiler trials.

**Ex. E. 74. Fuels and Gas Engine Laboratory.**

Seniors in E. Ch., T. E., second term, four hours.

This is an abridged course in these laboratories and covers a small amount of testing of materials in addition. The work covers the testing of internal combustion engines, the calorific values of fuels, tests of cement, and tests of strength of materials.

**Ex. E. 76. Power Plants.**

Juniors in M. E., E. E., and E. Ch., second term, two hours.

Juniors in E. E. Co-op course, second term, alternate two weeks, four hours.

This course is devoted to the study of power plants and auxiliaries, and the apparatus used in the testing of same. The testing of air machinery, hydraulic machinery, internal combustion engines, refrigeration plants and miscellaneous machinery used by the engineer. Methods of keeping plant records and their interpretation is taken up.

Text-book used in 1917-1918 Power Plant Testing by *Moyer*.

**Ex. E. 77. Heat Engines and Thermodynamics.**

Seniors in E. E., C. E., E. Ch., and T. E., first term, three hours.

The thermal properties of gases, expansion of gases, thermodynamic processes and cycles, the thermal properties of vapors, wet and superheated vapors, the steam engine, steam cycles, losses in steam engines, design and test of steam engines, the steam turbine, condensing machinery, combustion, steam boilers, boiler plant accessories, water cooling apparatus, hot air engines, the internal combustion engine, design and performance of combustion engines, gaseous fuels, compressed air, refrigeration, heating, ventilation, evaporation, drying and entropy diagrams are treated in this course.

Text-book 1917-1918 Practical Thermodynamics, by *Cardullo*.

Ex. E. 77a. Seniors in E. E. Co-op., first term, four hours every other two weeks.

This is an abridgement of course Ex. E. 77.

Ex. E. 78. Seniors in E. Ch., T. E., second term, two hours.

This course is a continuation of course Ex. E. 77. Particular stress being placed on power plant equipment and its operation. Standard power plant designs are studied.

**Ex. E. 80. Hydro-Electric Power Plants.**

Seniors in E. E., second term, two hours.

Seniors in E. E. Co-op., second term, four hours every other two weeks.

This course deals with the Hydraulic Engineering only, and covers the fundamental principles of hydraulic motors, water wheels and turbines, typical installations and the cost of water power.

Text-book used 1917-1918 Hydro-Power Plants by *Black and Turneure*.

**Ex. E. 84 and 84a. Engine Laboratory.**

Seniors in E. E., second term, four hours.

Seniors in E. E. Co-op., second term, four hours.

The work in this course includes the testing of steam engines, valve setting, tests of internal combustion engines, testing of pulsometers and air compressors.

**Ex. E. 86 and 86a. Gas Engine Laboratory.**

Seniors in M. E., M. E. Co-op., second term, four hours.

Complete tests of internal combustion engines are given in this course, including heat balances and entropy analysis. The student is required to determine the heating value of his fuels and make an analysis of the exhaust gases.

## GEOLOGY AND METALLURGY

PROFESSOR \_\_\_\_\_\*.

### General Statement

The Department of Geology and Metallurgy does not offer a separate degree, but gives courses which are needed for

\*To be supplied.

other degrees offered by the school. The aim, therefore, is to give such courses as will emphasize geologic and metallurgic principles in their application to the engineering fields of other departments. Special efforts are made to bring the student in contact with those publications which are vital forces in his chosen field. Topics for special investigation, and articles for special review are assigned to him, and as many class-room references as possible are made to the literature of this particular field. To impress upon the student the practical side of his work, inspection tours are made, which enable him to see in actual operation the processes discussed in the class room. In every department of the work the aim is to make the student responsible for himself; so that he may learn to attack a piece of work or a problem with the sole purpose of getting out of it, not what this or any other department may require by schedule from him, but what that particular case merits of his best efforts.

### Equipment

The equipment consists of the usual office, section room, museum and assay laboratory. The museum has collections as follows,—type collections for Mineralogy, Petrography, and Geology; working collections for Crystallography, Mineralogy, and Petrography, Building Stones Collection; Metallurgical Products Collection. For use in the class room there is a catalog library of 700 bulletins, prints and papers. The assay laboratory is equipped with a gas furnace and has access to a set of analyzed ores to the number of 200. There is also a Saveur Microscope for work in Metallography in this laboratory. Material is being added to the equipment from time to time through regular funds and through the kindness of patrons in the commercial world.

#### Geology 1 and 1a. Ferrous Metallurgy.

Prerequisite, Chem. 1, 2, 5, 6.

Geol. 1. Sophomore, first term, students in Chem., E. Ch., C. E., E. E. and M. E., who are not taking C. E. 1.

Geol. 1a. Sophomore, second term, students in Chem., E. Ch., C. E., E. E. and M. E., who have not taken Geol. 1.

A course of recitations and lectures covering four sections as follows,—(a) Fuels. The work in this section consists of a brief study of the various kinds and the uses of fuels, together with their metallurgical applications. (b) Refractory Materials. The various types of crucibles, casting sands, mortars, and different acids and basic linings for furnaces are studied under this head. (c) Metallurgical Problems relating to Coal, Boilers, Blast Furnaces, etc., are studied. (d) Iron and Steel. No attempt is made to treat this section in detail, but modern steel making practice is taken, with special stress being laid on the Blast Furnace, the Besemer, Open Hearth and Alloy Steels.

Text-books: *Stoughton's "Iron and Steel."* Department's Notes on "Fuels, Combustion, Refractories and Related Problems."

#### Geology 5. Petrography.

Prerequisite, Chem. 1, 2, 5, 6.

Juniors in Chem., second term. Not offered in 1918-19.

A course of three recitations and three hours laboratory per week covering the following sections: (a) Crystallography. In this section only such parts as are essential to the proper understanding of minerals as seen in the hand specimen are taken. The student is required to study wooden models of perfect crystals and then apply this knowledge to natural crystals. (b) Blowpiping. The student is supposed to be familiar with the mechanical use of the blowpipe from his work in the Chemistry Laboratory, so that but few tests for common minerals are given here. (c) Determinative Mineralogy. The work of this section is to drill the student in the material presented so that he may determine the more common mineral species by means of their crystal forms, a few simple blowpipe reactions and in the main, by their physical properties. (d) Petrography. The same method is followed in this section as in Determinative Mineralogy and stress laid only on the hand specimen as the time does not permit the use of a microscope.

Text-book: *Phillips' "Mineralogy."*



Geology 8. Non-Ferrous Metallurgy.

Prerequisite, Chem. 1, 2, 5, 6.

Second term, four hours.

(Given if applied for by a sufficient number of students.)

A recitation course, in which the metallurgy of gold, silver, copper and lead is studied, the entire time being put on the modern practice in this country. No attempt is made to grasp the minutiae of the many processes, but each is studied as closely as is required to bring the student to the position where detailed work can be carried on at his pleasure. Extensive use is made of library assignments, trade catalogues and inspection trips.

Text-book: *Borcher's "Metallurgy."*

Geology 10. Geology.

Prerequisite, Chem. 1, 2, 5, 6.

Seniors in Chem., and Sophomore in C. E., second term, three hours.

A recitation course, consisting of Dynamical Geology, in which the student studies the forces which are now at work changing the surface of the earth, such as the atmospheric, aqueous and igneous agencies; Structural Geology, a study of earth materials, their past and present forms; Historical Geology, which treats of the earth's life and history as revealed in the sequence of the rock beds. Use is made of the library and field trips as opportunity offers.

Text-book: *Ries and Watson's "Engineering Geology."*

Geology 12. Assaying.

Prerequisite, Geology 5, Chem. 13, 14.

Second term, three hours.

(Given if applied for by a sufficient number of students.)

A laboratory course, including a study of slags; fluxing of a limestone and of a siliceous ore; the assay of lead ores, both sulphide and oxide; and the various methods of assays of gold and silver ores.

Text-book: *Fulton's "Manual of Assaying."*

**DEPARTMENT OF INDUSTRIAL EDUCATION**  
**For the Training of Trade and Industrial Teachers for**  
**Secondary Schools Organized Under the**  
**Provisions of the Smith-Hughes Act**

This department has been organized at the Georgia School of Technology as a part of a comprehensive scheme of the State and Federal Governments for the encouragement and promotion of vocational education. The specific work that the Georgia School of Technology is undertaking is the training of teachers for secondary trade and industrial schools that are being organized throughout the state under the provisions of the Smith-Hughes Act. This Act, which provides a scheme for cooperation between the Federal Government and the States in the promotion of vocational education, became effective July 1, 1917, and its provisions were accepted by the State by an Act of the Legislature signed by the Governor August 21, 1917.

Changing industrial conditions are making it increasingly difficult for the boy who leaves school when around fifteen years of age to secure adequate training in the various trades and industries that offer opportunities for useful and profitable employment. Because of this fact, schools and classes are being organized throughout the state for the purpose of providing an opportunity for the boys of Georgia to secure training in some line of industrial work that will fit them for lives of usefulness and profit. Trained teachers will be required for these schools and classes, and the men who prepare for and engage in this important work will render a genuine service to their state and country. High standards of practicability and efficiency are demanded by the State and Federal Governments, and salaries will be correspondingly attractive for those who are properly qualified and trained for this work.

**Scheme for the Training of Trade and Industrial**  
**Teachers Under the Provision of the**  
**Smith-Hughes Act.**

It is the purpose of the Georgia School of Technology, through its Department of Industrial Education, to train four groups of men for teachers of the trades and industries. These will be designated as Groups A, B, C, and D.

Group A. Men who have had trade experience equal at least to two years in excess of the period required to learn the trade and at least an elementary school education or its equivalent may qualify as shop teachers upon satisfying the following conditions:

a. They will be required to demonstrate that they possess ability to execute assigned work in their trade or industry in a creditable manner.

b. They shall pursue a course in specialized training at the Georgia School of Technology or at the centers best suited for this instruction.

c. After entering upon their work as instructors, they shall submit written reports upon an assigned course of reading. These reports shall be made to the instructor in charge of extension work in Industrial Education at the Georgia School of Technology, and shall be made through the first two years after entering services as instructor.

Note. Men under this group will be qualified to teach shop subjects (1) in school systems of cities where several teachers in specialized shop work will be required. (2) in part-time trade schools and (3) in evening trade schools.

Group B. Men who have had two years' successful trade experience and the equivalent of a high school education, or men who have had two years' training in a technical school of college grade and successful contact with a trade or industry, may pursue a special course in Industrial Education at the Georgia School of Technology. This course will lead to a certificate of proficiency, and will include drawing, English, the more elementary mathematics, professional courses in Industrial Education, and a thorough training in industrial shop work.

Group C. Graduates of the Georgia School of Technology in any of the courses leading to the degree of B.S. in Civil Engineering, Mechanical Engineering, Electrical Engineering, or Textile Engineering, may qualify for teachers of subjects related to trades and industries in which they have had actual experience upon fulfilling the conditions, outlined in special bulletin.

Group D. Regular students at the Georgia School of Technology may pursue a four year course in Industrial

Education leading to the degree of B.S. in Industrial Education. Students in this group who possess no actual trade experience will be required to secure regular employment during the summer months of two years in some trade or industry and in some capacity that will provide actual contact with the work of that trade or industry. This work will be arranged through and be under the direction of the instructor in charge of coordination at the Georgia School of Technology.

Men who qualify for this degree, and who engage in the teaching of shop or related subjects for a period of years, should be qualified for a responsible position as principal of a trade or industrial school, or as city superintendent of industrial schools.

#### Outline of Courses for the Preliminary Training of Men Possessing Trade Experience.

No formal attempt has been made to set down the exact content of the short courses proposed for the preparation of shop teachers from the ranks of men possessing trade experience. This work will be given in the form of lectures and discussions, with occasional assignments taken from bulletins. After a lecture and discussion, mimeographed notes covering the essentials of the discussion in outline form will be distributed, and questions covering the topics discussed in the lecture and outlined in the notes will be asked at the next meeting of the class. The aim will be to make whatever discussion of scientific principles of educational theory and practice as may enter into the course of so practical a nature that the men taking the course may readily discern the direct application of these principles to the teaching of their particular trade or industry. The modern conditions in trades and industries that have stimulated nation wide interest in industrial education will be reviewed; the meaning and intent of industrial education in terms of the Smith-Hughes Act will be considered; the analyses of the various trades represented in the school will be attempted; and various courses given in representative industrial schools will be studied.

The plan for the training of these trades teachers includes a two years' course of assigned readings upon which



written reports will be required. The aim of this course of assigned readings is to supplement the work of the preliminary training, to direct attention to timely topics allied to industrial education, and to provide a means of introduction to the literature of industrial education.

## SCHEDULE OF COURSES IN INDUSTRIAL EDUCATION

For the Training of Teachers Under the Provision of the Smith-Hughes Vocational Education Law.

Special Course Leading to a Certificate of Proficiency

### FIRST YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Rec.	Lab'y	Equ'v
*Chem. 1	Inorganic Chemistry	3		7.5
*Chem. 5	Chemical Laboratory		2	2.5
Dr. 1	Freehand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	3		7.5
Ind. Ed. 21	Psychology	3		7.5
	**Electives in Shop Work		12	12.
Mil. 1	Military Instruction		3	3.
Total..				51.

#### Second Term

*Chem. 2	Inorganic Chemistry	3		7.5
*Chem. 6	Chemical Laboratory		2	2.5
Dr. 6	Elementary Drawing		7	7.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Ind. Ed. 24	History of Industrial Education	3		7.5
Ind. Ed. 26	Sanitation and Industrial Hygiene	2		5.
Mil. 2	Military Instruction		3	3.
	**Electives in Shop Work		12	12.
Total..				52.5

### SECOND YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Rec.	Lab'y	Equ'v
Math. 15	Trigonometry	3		7.5
Ind. Ed. 31	Industrial Economics	2		5.
Ind. Ed. 33	Methods of Industrial Education	3		7.5
Ind. Ed. 51	Drawing Methods	2		5.
Mil. 3	Military Instruction		3	3.
	**Electives in Shop Work		18	18.
Total..				46.

#### Second Term

Abbrev.	Subject	Hrs. Per W'k.		
		Class	Lab'y	Equ'v
Ind. Ed. 34	Practice Teaching		4	4.
Ind. Ed. 36	Methods of Industrial Education	1		2.5
Ind. Ed. 53	Reports on Assigned Readings	6		6.
Ind. Ed. 58	Shop Organization	3		7.5
		2		5.
	Electives in Shop Work		18	18.
	Military Instruction		3	3.
Mil. 4				
Total..				46.

\*Where chemistry is offered as a qualification for entrance, physics will be given in place of chemistry.

\*\*Electives chosen by students will be subject to approval by the faculty, and will be governed by the following consideration: (1) Shop work will be required to supplement the trade experience of the student: (2) Shop work will be required in some additional trade or industry in a sufficient amount to make the student fairly proficient in his second chosen field.

Four Year Course Leading to the Degree of B.S. in Industrial Education.

### FRESHMAN YEAR

#### First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Class	Lab'y	Equ'v
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		7.5
Math. 15	Trigonometry	3		7.5
M. E. 3a	Wood Shop		6	6.
M. E. 5	Smithy		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

#### Second Term

Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Math. 18	Analytical Geometry	5		12.5
M. E. 4a	Wood Shop		3	3.
M. E. 6	Smithy		3	3.
Mil. 2	Military Instruction		3	3.
Total..				50.

## Georgia School of Technology

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Lec.	Lab'y	Equ'y
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			
Phys. 5 and 7	Mechanics and Sound	3	3	11.5
C. E. 1	Plane Surveying	1	3	5.5
Dr. 13	Machine Drawing		3	3
Math. 21	Analytic Geometry	2		5
M. E. 3e	Wood Shop		3	3
M. E. 7	Foundry		3	3
Ind. Ed. 21	Psychology	3		7.5
Mil. 3	Military Instruction		3	3
Total..				49

## Second Term

Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading			
Phys. 6 and 8	Heat, Light and Electricity	3	3	11.5
Dr. 14	Machine Drawing	2	3	5
Math. 2	Shop Mathematics		3	3
M. E. 4e	Wood Shop		3	3
M. E. 8	Foundry		3	3
M. E. 16	Plumbing		3	3
Ind. Ed. 24	History of Industrial Education	3		7.5
Ind. Ed. 26	Sanitation and Industrial Hygiene	2		5
Mil. 4	Military Instruction		3	3
Total..				51.5

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Lec.	Lab'y	Equ'y
Ind. Ed. 31	Industrial Economics	2		5
Ind. Ed. 33	Methods of Industrial Education	3		7.5
Ex. E. 7	Elementary Mechanics and Strength of Materials	3		7.5
Ex. E. 47	Elementary Material Laboratory		3	3
M. E. 11	Machine Shop		6	6
M. E. 17	Sheet Metal Work		6	6
M. E. 19	Advanced Blacksmithing		3	3
Arch. 31	Building Construction (Masonry)	1		2.5
Arch. 35	Sanitation of Buildings	1		2.5
Mil. 5	Military Instruction		3	3
Total..				46

## Second Term

Ind. Ed. 34	Practice Teaching		3	3
Ind. Ed. 36	Methods of Industrial Education	1		2.5
Geol. 1a	Ferrous Metallurgy	2		5
M. E. 12	Machine Shop		6	6
M. E. 18	Wood Finishing		3	3
C. E. 34	Masonry Laboratory		3	3
T. E. 60	Carding and Weaving	2		5
T. E. 62	Carding and Weaving		3	3
Arch. 32	Building Construction (Masonry)	1		2.5
	***Elective	3	7.5	7.5
Mil. 6	Military Instruction		3	3
Total..				43.5

## Department of Industrial Education

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k.		
		Lec.	Lab'y	Equ'y
Ind. Ed. 51	Drawing Methods	2		5
Ind. Ed. 53	Reports on Assigned Readings	6		6
Ex. E. 15	Operation of Engines	1	4	6.5
T. E. 61	Carding and Weaving		3	7.5
T. E. 63	Carding and Weaving		6	6
Arch. 63	Building Construction (Carpentry)	1		2.5
	***Elective	6 or	15	15
Mil. 7	Military Instruction		3	3
Total..				51.5

## Second Term

Ind. Ed. 56	Vocational Guidance	2		5
Ind. Ed. 58	Shop Organization	3		7.5
E. E. 1a	Applied Electricity	2		5
E. E. 3a	Electrical Laboratory		3	3
T. E. 64	Carding and Weaving	3		7.5
T. E. 66	Carding and Weaving		6	6
Arch. 64	Building Construction	1		2.5
	***Elective	6 or	15	15
Mil. 8	Military Instruction		3	3
Total..				54.5

\*\*\*Electives chosen by students will be subject to approval by the faculty, and will be governed by the following considerations: (1) No student may elect a course unless he has passed the prerequisites for that course; (2) Subjects elected must be either a continuation of or directly related to the courses scheduled as required.

## Description of Courses

## Ind. Ed. 21. Psychology.

First Year Special and Sophomore, first term, three hours. Lectures and recitations.

An elementary study of the general phenomenon of consciousness; sensation, images, affections, and the laws of their grouping in perception, attention, association, memory, etc., with particular attention given to the applications of psychology to industrial education.

## Ind. Ed. 24. History of Industrial Education.

First Year Special and Sophomore, second term, three hours. Lectures and recitations.

The characteristic ideals of ancient, mediaeval, and modern educational systems will be briefly considered; but the primary aim of the course will be the study of the rise and development of industrial education. The



various apprentice systems under changed industrial conditions since mediaeval times will be reviewed, and the modern conditions that have stimulated interest in trade and industrial schools in the United States will receive careful attention.

**Ind. Ed. 26. Sanitation and Industrial Hygiene.**

First Year Special and Sophomore, second term, two hours. Lectures and recitations.

The fundamental conditions of health as related to comfort and efficiency, and the attainment of these conditions through proper heating, lighting, and ventilation of factory buildings and the proper housing of the worker. The administration of 'first aid', and the control of contagious and infectious diseases through sanitation and cleanliness, will receive careful attention.

**Ind. Ed. 31. Industrial Economics.**

Second Year Special and Junior, first term, two hours. Lectures and recitations.

A continuation of Political Economy (Eng. 24). The study of the special industrial relations of labor, capital, rent, interest, wages, profits, and profit sharing, and the aims of industrial education in the lessening of poverty and crime through industrial preparedness.

**Ind. Ed. 33. Methods of Industrial Education.**

Second Year Special and Junior, first term, three hours. Lectures and recitations and inspection trips.

A study of the application of the principles of pedagogy to the special field of industrial education; the consideration of courses pursued and methods used in industrial schools in the United States and Europe; and the aim and intent of vocational education under the provisions of the Smith-Hughes Act. Visits will be made to industrial shops and industrial schools.

**Ind. Ed. 34. Practice Teaching.**

Second Year Special and Junior, second term, four hours practice in actual teaching.

Practice in teaching of industrial shop work will be given in the shops of the school under the direction and supervision of an experienced tradesman and teacher.

**Ind. Ed. 36. Methods of Industrial Education.**

Second Year Special and Junior, second term, one hour. Lectures and recitations.

A parallel course to Ind. Ed. 34. The problems arising in practice teaching will be considered.

**Ind. Ed. 51. Drawing Methods.**

Second Year Special and Senior, first term, two hours. Lectures and recitations.

Special value and adaptations of drawing in relation to the field of vocational teaching in industrial school shops.

**Ind. Ed. 53. Reports on Assigned Readings.**

Second Year Special and Senior, first term, six hours per week.

Conferences, readings, and written reports upon timely topics related to vocational guidance, industrial education, efficiency of shop organizations, etc., with the aim of introducing the student to the literature of his chosen work.

**Ind. Ed. 56. Vocational Guidance.**

Senior, second term, two hours. Lectures and recitations.

A study and an attempt at classification of the individual characteristics and abilities in their relation as determining factors in denoting adaptability to particular occupations. The course will be closely related to Ind. Ed. 21; and various psychological tests will be discussed and demonstrated as time will permit.

**Ind. Ed. 58. Shop Organization.**

Second Year Special and Senior, second term, three hours. Lectures, recitations, and shop visits.

This course will consider the fundamentals of shop organization and as many of the specialized "systems" as time will permit. Especial attention will be given to the practical adaptations of these systems in the organization of courses in the industrial school shop.

## DEPARTMENT OF MATHEMATICS

PROFESSORS FIELD, SKILES, MORTON AND SMITH, MESSRS. STAMY AND MILES.

### General Statement

Great importance is attached to the study of Mathematics. Primarily the aim of the instruction is to supply the student with a working knowledge of those principles which he needs in the study of engineering; but since the acquisition of a ready and logical mind is quite as valuable as the ability to use the subject, it is not the purpose to subordinate altogether the logical development of mathematics to the practical side.

Instruction in this department is given by use of textbooks, supplemented by oral explanations and lectures. The student's knowledge of the subject is tested almost daily. It is hoped that the classes may be subdivided into sections numbering from twelve to twenty, thus making possible the individual treatment of students who require it.

### Entrance

For entrance to the Freshman Class by examination, it will be necessary to pass the following subjects:

Plane and Solid Geometry: all theorems and one-third of exercises.

Elementary and Advanced Algebra: factors, fractions, involution, evolution, exponents, radicals, solution of quadratic equations by formula and by factoring, simultaneous equations, ratio, proportion, variation, progressions, partial fractions, logarithms, etc.

Do not omit the subject of logarithms, for this is necessary for Freshman Trigonometry.

A review course in Algebra during the last half year of the high school would be of great value to the student. In this course, drill should be given in problems involving ex-

ponents, solution of equations, reduction of fractions, radicals, etc. The inability of students to do this part of the later work is the chief cause of discouragement and failure.

## Courses of Instruction

### Math. 2. Shop Mathematics.

Second Year Specials and Sophomores in Industrial Education.

This course emphasizes the practical industrial applications of mathematical principles with which the students are already familiar.

Lectures and assigned problems. Not open to engineering students.

### Math. 3. Algebra.

Prerequisite, Elementary Algebra to Simultaneous Quadratics.

Freshman, first term, three hours.

This course is designed for those students who are conditioned in higher Algebra. It covers the subjects of ratio, proportion, variation, progression, partial fractions, logarithms, etc.

Text: *Ashton and Marsh*.

### Math. 7. Geometry.

Prerequisite, Plane Geometry.

Freshman, first term, three hours.

This course is for those students who enter, conditioned in Solid Geometry. It is the usual course with propositions and two-thirds of the exercises.

Text: *Wentworth and Smith*.

### Math. 11 and 11a. Freshman Algebra.

*Professors Field, Skiles and Smith, Messrs. Stamy and Miles.*

Prerequisite, Entrance Mathematics for Freshman.

Math. 11. Freshman, first term, three hours.

Math. 11a. Freshman, second term, three hours, following Math. 3.



A review of the important topics in the Algebra for entrance to the Freshman Class and advanced work in Theory of Equations.

Text: *Hawkes*.

**Math. 15 and 15a. Trigonometry.**

*Professors Skiles, Morton and Smith, Messrs. Stamy and Miles.*

Prerequisite, Entrance Mathematics for Freshman. Math. 15. Freshman, first term, three hours.

Math. 15a. Freshman, second term, three hours, following Math. 3.

The derivation of all formulas of Plane Trigonometry, transformations, solution of trigonometric equations, right and oblique triangles. All exercises worked.

Text: *Crawley's* "Plane Trigonometry;" Wentworth's 5 place tables.

**Math. 18. Analytic Geometry.**

*Professors Skiles, Morton and Smith, Messrs. Stamy and Miles.*

Prerequisite, Math. 3, 7, 11 and 15.

Freshman, second term, five hours.

Includes points, lines, circles, plots both rectangular and polar, transformation of co-ordinates from rectangular to polar and polar to rectangular, the ellipse, parabola, hyperbola, and loci of second order.

Text: *Smith and Gale*, "New Analytic Geometry."

**Math. 19. Analytic Geometry.**

*Professor Morton.*

Prerequisite, Math. 3, 7 and 15, or parallel with Math. 15.

First Year, Special Electrical, first term, three hours. The usual subjects of plane Analytical Geometry.

**Math. 20. Analytic Geometry.**

*Professor Smith.*

Prerequisite, Math. 3, 7, 11, 15, 19.

First Year, Special Electrical, second term, three hours.

Complete plane Analytic Geometry and the Geometry of three dimensions. Math. 19 and 20 cover the same work as Math. 18 and 21 of the regular course.

**Math. 21. Analytic Geometry.**

*Professors Field, Skiles, Morton and Smith, and Mr. Stamy.*

Prerequisite, Math. 11, 15 and 18.

Sophomore, first term, two hours.

Special work in curve tracing and analytic geometry of three dimensions.

Text: *Smith and Gale*, "New Analytic Geometry."

**Math. 25. Calculus.**

*Professors Field, Skiles, Morton and Smith, and Mr. Stamy.*

Prerequisite, Math. 11, 15 and 18.

Sophomore, first term, three hours.

Introduction to Differential Calculus, including the derivatives of all algebraic and transcendental functions, maximum, minimum and curvature.

Text: *Granville's* "Calculus."

**Math. 26. Calculus.**

*Professors Field, Skiles, Morton and Smith, and Mr. Stamy.*

Prerequisite, Math. 11, 15, 18, 21 and 25.

Sophomore, second term, five hours.

Complete Differential and Integral Calculus. Many problems of practical application from outside the text.

Text: *Granville's* "Calculus."

**Math. 28. Calculus.**

*Professor Skiles.*

Prerequisite, same as for Math. 26.

Sophomore, second term, five hours. Students in Arch., Chem. and E. C.

Integral Calculus and a short course in Differential Equations. A great many applications from Geometry, Physics, Chemistry, and Mechanics are given.

Text: *Granville's* "Calculus."

**Math. 35 and 35a. Differential Equations.**

*Professors Field, Skiles, Morton and Smith.*

Prerequisite, Math. 18, 21, 25, 26.

Math. 35. Junior, first term, two hours. Students in M. E. and C. E.

Math. 35a. Junior, second term, two hours. Students in E. E.

Ordinary Differential Equation of first and second orders and special types of higher order. A great many applications from Physics and Mechanics are given. Text: *Campbell's "Differential Equations."*

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**DEPARTMENT OF MECHANICAL ENGINEERING**

PROFESSORS COON, LOWNDES AND WEISS; MESSRS. MARTINDALE, HENIKA, THOMPSON, VAN HOUTEN, ADAMSON, NORMAN, PEACOCK, PRINTUP, GRIFFIN AND PATILLO.

**General Statement**

A mechanical engineer should possess accomplishments in three general particulars: He should be able to grasp and solve mechanical problems; he should be an expert mechanical draftsman in order to be able to design, and he should be thoroughly familiar with shop processes, and shop limitations. The studies in the mechanical course are laid out with these ends in view.

As Mathematics is, to a large extent, the basis of Engineering, the student is given a thorough course in this subject as an important part of his foundation work. Of scarcely less importance is the study of Physics and Chemistry, the former giving the student a knowledge of the laws of Nature, and the latter enabling him to better understand the composition of matter. The course in English is not only general, but practical in its benefits since an essential part of the equipment of every engineer is the ability to express his ideas clearly and concisely either orally or in writing.

With a careful preparation in the foregoing subjects as a groundwork the student is prepared to take up the subjects which are of a technical nature, and peculiar to the course in Mechanical Engineering. It will probably not

be questioned that a good designer of machinery must primarily be a good draftsman, and to this end the course in Mechanical Drawing extends throughout the four years, it being recognized that the "only way to learn how to draw is to draw." Supplementing the work in the drafting room a course is given in Machine Design, both by text books and lectures, and in his Senior year the student is thrown largely upon his own resources, with the knowledge that neither here nor elsewhere, is the undergraduate competent to turn out good mechanical designs without assistance from an experienced designer.

As many hours as the time permits are devoted to work in the various shops. The purpose of this practical work is not to teach the student a trade, although it can not be questioned that the more skill a man possesses with his hands, the better off he is, in every way. Except one or two preliminary tasks, all the machine shop work is confined to parts of machines under construction, the student following working drawings prepared under the supervision of an experienced designer. In the limited time he is enabled to devote to this class of work, the student does not ordinarily acquire sufficient skill to readily make the accurate fits required in first class construction, but he unconsciously acquires a knowledge of the manner in which the several members of a machine have to be fabricated, and this knowledge is of inestimable value to him as a designer of machinery. Of a like value is the knowledge gained by his work in the foundry and smith shop. Experience in pattern making and in the foundry enables the student to instinctively avoid designing needlessly difficult or absurd castings.

Studies of a strictly technical character pertaining to this course necessarily are deferred to the later years, as a thorough knowledge of the subject already briefly touched upon is essential to a comprehensive grasp on the student's part, of the basic principles of Mechanical Engineering. Many men have become eminent as engineers who had no training in a technical school. It is no doubt equally true that many men have become of great service in the engineering profession who owe their inspiration, their initial start, to the training, the mental discipline they received in some technical school. The purpose of a course in engineering is not so much in the line of imparting



facts and information, as it is to enable the student to form the habit of logically reasoning, to depend upon his own resources, to draw correct conclusions from given premises,—in short, to *think*.

Engineering courses do not pretend to cover the whole field of technical thought and achievement. At best they can impress upon the student only basic principles. Students who pursue successfully the course in Mechanical Engineering can not hope to be experts in all its varied and useful fields. On joining the great army of workers in the commercial world, they will inevitably drift into some particular line of work in which the productive period of their lives will be passed.

It will be conceded that it is not sufficient for a course in engineering to turn out technical experts, if it can hope to do even this. But it must do much more; it must turn out *men*. While the schedule of subjects in this course does not indicate it, it is the prime object to send out young men to engage in the commercial work of the world with high ideals and a keen sense of moral responsibility. Good character is of more importance to the young engineer than engineering ability. Much has been said about the "commercialism" of our time, but it is probable that no other one cause can have so profound and widespread influence for the uplift of all, as the right kind of manufacture, of trade, of commerce. There can not be too much commerce of the right sort. An earnest effort is made to fit our young men for the responsibilities of citizenship and to impress upon them the fact that the useful life, the life worth living, is a life of service.

### Equipment

With the growth of the school, adequate as our shop equipment seemed to be, it has been outgrown, and the year 1912 saw a portion of the shops displaced by new ones of a decidedly better class. The new shops comprise a smith shop, containing space for forty forges,—twice the former equipment,—and a foundry. Both of these shops are strictly up-to-date in plan, and among their most marked characteristics are the flood of light, and the splendid

ventilating systems. Forges of the down-draft system are installed in the smith shop, with also a score of vises for bench work. The foundry is equipped with core oven, brass foundry, overhead traveling crane, and an oil system for starting cupola fires. All roof trusses are of steel, in both shops, with a glass monitor roof. All blowers are electrically driven.

Adjoining the new shops is an administration building of strictly fire-proof construction, having brick walls, reinforced concrete floors and roof,—the latter covered with slate. This building is four stories high. On the basement floor are offices for the smith shop and foundry foremen, with complete lavatory and toilet facilities, and large storage bins for blacksmith's coal, and for other storage purposes. On the next, or ground floor, are a museum, a library, a large locker room with space for seven hundred lockers, and adjoining the latter are ample lavatory and toilet facilities for the students working in the shops. These rooms are fitted up in the style found in strictly first class hotels, and form an object lesson to the students as to the provision which should be made for working men.

On the second floor of the administration building are the offices of the mechanical director, and two large class rooms, and a drawing room, besides a janitor's room. On the top floor are two large drawing rooms, and a handsome studio and office, the entire floor being used by the Department of Architecture. The blackboards in the drawing rooms, and the class rooms below, are made of slate.

Later, new wood shops and machine shops will be added, each 40 ft. x 200 ft., with necessary offices, tool rooms, store rooms and lecture rooms.

The machine shop equipment comprises a large assortment of tools incident to the needs of the School. Several of these tools are much larger than are to be found at other technical shops. Among them are an iron planer 36 inch x 40 inch x 10 feet; two lathes having 25 ft. beds, the larger 36-inch swing; five 20 inch x 20 inch x 6 ft. iron planers all of our own design and manufacture complete; six emery wheel stands, and the steam engine which at present drives all the machinery in all the shops. Much of the machine shop equipment is new, including a universal

milling machine, a universal grinding machine, shaping machine, horizontal boring machine and many lathes. The growth of the School will require additions to this equipment when we move into the new shops.

Besides the tools, etc., mentioned above as having been made in our shops, we have also made a 24-inch buzz planer for our own use which has given excellent satisfaction. The shops have also made nineteen high-speed wood lathes, all for our own use. We have also made a hot water boiler feed pump which has been a long time in successful service, scores of shaft hangers and bearings, many electrical machines, including a large rotary converter, many steam traps *which work*, steam and water pressure reducing valves, friction clutches, drawing stands, a great amount of cabinet work of various kinds and many other miscellaneous tools.

The shop management does not think it desirable, and thus far has not found it necessary to put students upon tasks to be cast into the scrap heap, though it would be much easier to run the shop on that plan. Neither does the shop purchase castings and drawings of machinery to be built. All work done in the shops is from our own design from beginning to end, and there has never been any indication that our plan is not successful.

For description of equipment used by students in mechanical engineering during the latter, or advanced part of the course, see Department of Experimental Engineering and also Electrical Engineering.

All students are given some practical work in concrete construction, which up to the present time has been in the form of outdoor walks, basement floors, flagging, or foundations.

## Course in Mechanical Engineering

## FRESHMAN YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Dr. 1	Freehand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3a	Wood Shop		6	6.
M. E. 5 (or 7)	Smithy (or Foundry)		3	3.
Mil. 1	Military Instruction		3	3.
Total..		12	17	45.5

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Dr. 2	Descriptive Geometry	3		7.5
Dr. 4	Descriptive Geometry Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing	1		1.
Math. 18	Analytic Geometry	5		12.5
M. E. 4a	Wood Shop		3	3.
M. E. 7a (or 5)	Foundry (or Smithy)		3	3.
Mil. 2	Military Instruction		3	3.
Total..		15	14	50.

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 9	Qualitative Analysis (Elective for 4 hours M. E. 11)		4	4.5
Dr. 13	Machine Drawing		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			
Geol. 1	Ferrous Metallurgy (or C. E. 1)	2		5.
Math. 21	Analytic Geometry	2		7.5
Math. 25	Calculus	3		7.5
M. E. 11	Mach. Shop (4 hrs., Elec. for Chem. 9)		6	6.
Phys. 9	Physics	4		10.
Mil. 3	Military Instruction		3	3.
Total..		14	13	54.



## Georgia School of Technology

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 10.	Qualitative Analysis (Elective for 4 hours M. E. 12)			
C. E. 1a	Plane Surveying (or Geol. 1a)	1	4	4.5
Dr. 14	Machine Drawing		3	5.5
Eng. 24	Political Economy	3	3	3.
Eng. 28	Parallel Reading			7.5
Math. 26	Calculus	5		
M. E. 12	Mach. Shop (4 hrs., Elec. for Chem. 10)			12.5
Phys. 10	Physics	4	6	6.
Phys. 14	Physics Laboratory		3	10.
Phys. 20	Slide Rule		.5	4.
Mil. 4	Military Instruction		3	.5
Total..		13	22.5	56.5

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Dr. 21	Machine Drawing		3	3.
Dr. 23	Mechanism	4		10.
Eng. 31	English Literature	3		7.5
Eng. 35	Literary Thesis			
Ex. E. 21	Calibration Laboratory		3	4.
Math. 35	Differential Equations	2		5.
M. E. 23	Analytic Mechanics	3		7.5
M. L. 1	German	3		7.5
M. L. 7	French			
M. L. 13	Spanish			
Phys. 11	Physics	3		7.5
Phys. 15	Physics Laboratory		3	4.
Mil. 5	Military Instruction		3	3.
Total..		18	12	59.

## Second Term

C. E. 15a	Hydraulics	3		7.5
Dr. 22	Kinematic Drawing		3	3.
E. E. 4	Applied Electricity	2		5.
Eng. 32	English Literature	3		7.5
Eng. 36	Literary Thesis			
Ex. E. 52	Hydraulic & Materials Lab'y.		3	4.
Ex. E. 76	Power Plants	2		5.
M. E. 24	Analytic Mechanics	3		7.5
M. E. 28	Mechanics of Materials	3		7.5
M. L. 2	German	3		7.5
M. L. 8	French			
M. L. 14	Spanish			
Mil. 6	Military Instruction		3	3.
Total..		19	9	57.5

## Department of Mechanical Engineering

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 71	Business Organization & Mgm't	1		2.
E. E. 3	Electrical Engineering Laboratory		3	4.
E. E. 5	Applied Electricity	2		5.
Ex. E. 71	Fuels Laboratory		3	4.
M. L. 3	German	3		6.
M. L. 9	French			
M. L. 15	Spanish			
M. L. 31	Mechanics of Materials	2		5.
M. E. 33	Engineering Problems	2		5.
M. E. 35	Steam Engine	4		10.
M. E. 39	Valve Gears	2		5.
M. E. 41	Designing (Drawing)		6	6.
M. E. 51	Shop Methods	1		2.5
Mil. 7	Military Instruction		3	3
Total..		17	15	57.5

## Second Term

Com. 72	Commercial Law	1		2.
Ex. E. 72	Steam Engine Lab'y		3	4.
Ex. E. 86	Gas Engine Lab'y		3	4.
M. L. 4	German	3		6.
M. L. 10	French			
M. L. 16	Spanish			
M. E. 36	Gas Engines	4		10.
M. E. 42	Machine Design (Drawing)		6	6.
M. E. 44	Machine Design	3		7.5
M. E. 46	Graphical Statics	2		5.
M. E. 48	Steam and Water Turbines	2		5.
M. E. 52	Shop Methods	1		2.5
	Thesis			4.
Mil. 8	Military Instruction		3	3.
Total..		16	15	59.

## Courses of Instruction

## M. E. 3 and 4. Woodshop.

Professor Coon, Mr. Henika, Mr. Norman, Mr. Printup and Mr. Patillo.

M. E. 3a and 4a, Freshman E. E. and M. E., first term 90 hours, second term, 45 hours.\*

M. E. 3c, Freshman Arch., Chem., C. E., and E. Ch., first term 45 hours.

M. E. 3c, Freshman T. E. and Sp. T. E., first term, 36 hours.

\*In the shop courses the total hours per term is given. In other courses, hours per week.

M. E. 3e, Sophomore Ind. Ed., first term, 45 hours.

An advanced course in Cabinet Making required of four year students in Industrial Education. Not open to engineering students.

M. E. 4e, Sophomore Ind. Ed., second term, 45 hours.

An advanced course in Pattern Making required of four year students in Industrial Education. Not open to engineering students.

1st.—To pass Woodshop, students must complete Bench and Lathe work, pass examination in Text Books, and put in 40 hours maximum or 20 hours minimum time, on Cabinet and Pattern Making; as soon as the Maximum is completed, they are excused from Woodshop, and they can not graduate until the minimum is completed.

2nd.—Each unexcused absence shall take four points from grade; deficiencies caused by unexcused absences, at the end of the month, will necessitate repeating the subject.

3rd.—No student will be allowed to do more than four hours work for himself until the maximum time has been completed.

As described above, the beginner completes satisfactorily about twelve tasks in joint making in wood. He then takes up wood turning and is kept on this, turning at first mere tasks, but later useful articles, such as file handles, etc., until he has acquired considerable skill at the lathe. After the lathe work the student is put upon cabinet work. It is always upon some useful thing, usually something ordered by some Department of the School. For instance, students have made many hundreds of drawing boards, and scores of cabinets in pine, and in plain and quartered oak.

Students who have completed the maximum of 40 hours time are allowed to construct articles for themselves, being charged the bare cost of materials used. Very many of these articles have reflected the highest credit upon the student, and some astonishingly beautiful things have been constructed by boys who had had no prior experience whatever in the use of tools.

Students are required to keep their tools in good order, and only the very best of tools are supplied to them. The student pays for all damaged or missing tools.

All students are required to pass an examination in pattern-making, which is taught by lecture, text book and pattern construction.

Students from accredited schools where wood working is taught, are given credit for such work, but are required to pass an examination in pattern-making.

Students in Industrial Education are required to put in the full time scheduled in all courses, but after having completed the minimum of 20 hours, as outlined above, on Cabinet and Pattern Making, they are urged to use the balance of the time in making useful articles for themselves upon the same basis as recommended for engineers, viz., that they are required to pay only the bare cost of the materials used.

M. E. 5, 6, and 19. **Smithshop.**

*Professor Coon and Mr. Thompson.*

M. E. 5 or 5a, Freshman, first or second term, 45 hours.

M. E. 5b, Freshman T. E. and Sp. T. E., second term, 30 hours.

M. E. 6, Freshman Ind. Ed., second term, 45 hours.

A continuation of M. E. 5, required of four year students in Industrial Education. Not open to engineering students.

M. E. 19, Junior Ind. Ed., first term, 45 hours.

An advanced course in Blacksmithing, required of four year students in Industrial Education. Not open to engineering students.

In the smithshop the student at first is given a set of tasks in forging, in order to acquire skill in the handling of a forge fire and in the heating of metals, as well as in the actual work of forging. He is taught the treatment required for different classes of steels, annealing and tempering, case hardening, brazing, tool dressing of lathe tools, etc. Students in this shop make a very great number of useful articles, such as razors, carving sets, drawing knives, andirons, hammers, etc.



This subject is taught by text-books and lectures, as well as by practice, and students are required to pass an examination on these.

**M. E. 7 and 8. Foundry.**

*Professor Coon and Mr. Van Houten.*

M. E. 7 or 7a, Freshman, first or second term, 45 hours.  
M. E. 7b, Freshman T. E. and Sp. T. E., first or second term, 30 hours.

M. E. 8, Sophomore Ind. Ed., second term, 45 hours.

A continuation of M. E. 7, required of four year students in Industrial Education. Not open to engineering students.

Students in the foundry do the various work of the foundryman, making molds for patterns, running heats from the cupalo, metal mixing, brass casting, aluminum and alloy making, core making, etc.

Students are required to pass an examination in this subject, which is taught, like the smith shop work, by text book and lectures, as well as by practice.

**M. E. 11, 12, and 13. Machine Shop.**

*Professor Coon, Mr. Martindale, Mr. Peacock, Mr. Adamson and Mr. Griffin.*

Prerequisite, M. E. 3, 4, 5, 7, and ability to read and understand simple machine drawings.

M. E. 11-12, Sophomore E. E., and M. E., first and second terms, 90 hours each term.

M. E. 11a, Freshman Chem. and E. Ch., second term, 90 hours.

M. E. 11b and 12b, Junior T. E. and Sp. T. E. II first and second terms, 45 hours each term.

M. E. 11c, Freshman C. E., second term, 45 hours.

The work in the machine shop is almost exclusively the construction of useful, workable machinery, as described in the opening announcement of the Department of M. E. All the varied processes carried on in a well equipped machine shop of a manufacturing plant are at the disposal of the student. He is given work in gear cutting, turning, shaping, planing, drilling, grinding, babbiting journal boxes, chipping, filing, scraping not

only flat surfaces, but scraping fits, laying out work, assembling, sketching, tool room keeping by check system, keeping machinery in order and making repairs of many kinds, valve fitting, cylinder boring, management of portable forge, keeping engines and dynamos in order, firing and caring for steam boilers. At all times a varied class of work is in process of construction, such as lathes, planers, gas engines, steam traps, grinding machines, friction clutches, electric machines of different kinds, etc., and repairs for the various departments of the school.

Instruction and practical work are given in pipe fitting, both steam and water, plumbing in its various branches, electric wiring, etc., all under instruction of experienced men in the varied classes of work,—men who have had large experience in commercial work. Special emphasis is placed on this last statement. There is not an instructor in the shops anywhere who has not come up through the school of hard knocks, with years of experience in commercial shops.

**M. E. 16. Plumbing and Pipe Fitting.**

*Professor Coon, Professor Tracy, and Mr. Griffin.*

Sophomores in Industrial Education, second term, 60 hours.

This course is designed to introduce the student to the fundamentals of the plumbers work, and will consist of the making of joints in wrought and cast iron pipe, lead pipe, and vitrified tile. All work will be executed to measure from working drawings. Students may elect additional work in plumbing during their Junior and Senior years. Not open to engineering students.

**M. E. 17. Sheet Metal Work.**

*Professor Coon, and Professor Tracy.*

Juniors in Industrial Education, first term, 60 hours.

This course will include the development of patterns and the making of various commercial articles of sheet metal. Practice and facility in the use of fluxes and

solder will be required. Students may elect additional Sheet Metal Work during their Junior and Senior years. Not open to engineering students.

**M. E. 18. Wood Finishing.**

*Professor Coon, Professor Tracy, and Mr. Henika.*

Juniors in Industrial Education, second term, 45 hours.

This course will consist of practice in the preparation of wood surfaces for finishing, and study and practice in the use of shellac, paint, filler, stain, and varnish. Not open to engineering students.

**M. E. 23-24. Analytic Mechanics.**

*Professors Lowndes and Weiss.*

Prerequisite, Math. 26 and 28, M. E. 11-12.

Junior M. E., first and second terms, three hours.

**M. E. 28 and 31. Mechanics of Materials.**

*Professors Coon and Lowndes and Weiss.*

Prerequisites, Math. 25 and 26, and all Physics.

M. E. 28, Junior, second term, three hours.

M. E. 31, Senior, first term, two hours.

Analysis of stresses in beams and girders. Analytical determination of formulas, of use of practical constants determined in testing machines. Columns, long and short, of wood, steel, concrete and reinforced concrete. Stresses in thick cylinders and boiler shells, pipe, etc. Girders, floors, roofs, etc., of reinforced concrete. Various stresses in shafting, transmission of power, etc. Centrifugal forces and other forces of acceleration in circular saws, fly wheels, connecting rods, etc. Stresses in tanks, grain bins, crane hooks, stand pipes, smokestacks, etc.

Text: *Merriman, Mechanics of Materials.*

**M. E. 33. Engineering Problems.**

*Professor Coon.*

Prerequisites, All Math., Physics, Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, first term, two hours.

Special problems in Analytical Mechanics, given to M. E. Seniors who have completed Ex. E.-1. Exclusively

lectures and problems in accelerated motion, such as centrifugal force, axis of spontaneous rotation, centre of percussion, point of application of resultant force, and its direction. Graphic analysis wherever applicable. Forces applied to bodies free to move, with resultant motion.

**M. E. 35. Steam Engine.**

*Professor Coon.*

Prerequisites, All Math., Physics, Analytic Mechanics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, first term, four hours.

Thermodynamics of steam. Action of the steam engine as a heat engine. Indicator card. Temperature-entropy chart. Analysis of compound and triple expansion engines, complete. Calorimetry, Condensers, Feed water heaters, Jacketing, Superheating, Injectors, and other boiler feeders. Lubricators, Governors, complete analysis by instant centre method (principle of virtual velocities.) Kinematics of the steam engine, relative effort. Accelerations of piston and forces set up. Graphics wherever applicable. Stresses due to various accelerations in connecting rod. Steam engine details, types of steam engines. Complete analysis of drop cut-off engines, such as Corliss, etc. Locomotive and marine engines. Steam engine design. Steam turbines.

Text: *Ripper.*

**M. E. 36. Gas Engine.**

*Professor Coon.*

Prerequisites, All Math., Physics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, second term, four hours.

Thermodynamics of gas engines, types of gas engines, —explosive engines, combustion engines, gas engine details, marine engines, stationary engines, gas engine fuels, combustion, carburetors, gas production, such as suction producers with "soft" coal, lignite, etc. Analysis of gas engine tests, heat balances, gas turbines.

Text: *Carpenter and Diederichs.*



**M. E. 39. Valve Gears.**

*Professor Coon.*

Prerequisites, All Math., Physics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, first term, two hours.

Complete analysis of plain slide valve gears, fixed and shifting eccentrics, by Bilgram, Zeuner and McCord diagrams. Exclusive graphics. Ryder (Meyer), and Gonzenbach gears. Complete blackboard analysis of link motions. Shifting (Howe-Stephenson) link; stationary (Danl. Gooch) link; straight link (Allan); Egide Walschaerts link; Pilliod link; all both for stationary and locomotive purposes. Buckeye valve gears. Joy, Marshall and Hackworth gears. Cam gears.

Text: *Halsey* and lectures.

**M. E. 41. Drawing.**

*Professor Coon.*

Prerequisites, All Math., Physics, and Draw. 1, 2, 4, 13, 14, 21, 23.

Senior, first term, six hours per week.

The student is given the elements of a machine to design, as nearly as possible as would be done in a commercial drawing office. He is thrown upon his own resources, having access to other machines to aid him in deciding upon sizes, thickness, etc., with expert advice to prevent his drawing absurdities. The designing covers a wide range of subjects, its principal value being to impress upon the student the conventional shop practice, and the proper method of producing working drawings of machinery. All the various machines, etc., manufactured in the shops are from working drawings made by students.

**M. E. 42. Machine Design Drawing.**

*Professor Coon.*

Prerequisites, All Math., Physics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, second term, six hours per week.

As far as possible the drawing of this term is in connection with the M. E. 44. It is also largely the solu-

tion of problems involving force, by use of graphical statics. Problems connected with governor design, as shaft governors, inertia governors, spring loaded governors, stresses in framed structures, etc. Laying out of power plants and works. There is also always something to be designed and drawn for our use in the shops.

**M. E. 44. Machine Design.**

*Professor Coon.*

Prerequisites, All Math., Physics, Analytic Mechanics, and Draw., 1, 2, 4, 13, 14, 21, 23, and M. E. 28 and 31.

Senior, second term, three hours. Text and lectures.

Wrought and cast iron pipe and fittings. Cylinders and joints. Boilers, horizontal, tubular, and vertical. Heating surface and grate area. Boiler and other riveted joints, analysis for maximum efficiency. Stacks and foundations. Clutches and brakes, disc, ring, strap and hydraulic. Belt and rope transmission. Locomotive and engine designs. Shafting hangers and lubrications. Gears, toothed and friction. Aeroplane construction.

Text: *Spooner.*

**M. E. 46. Graphical Statics.**

*Professor Coon.*

Prerequisites, All Math., Physics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, second term, two hours.

Lectures and problems. Warren, Pratt, Bollman trusses, Fink, "A" roof trusses, etc. Analysis by tabulation and moments, supplemented by graphics in the drawing room. Graphical solution of governor problems.

The construction of mills and factories is not given a separate heading. Modern mill construction, including foundations, is given during the Senior year.

**M. E. 48. Steam and Water Turbines.**

Professor Coon.

Prerequisites, All Math., Physics, and Draw., 1, 2, 4, 13, 14, 21, 23.

Senior, second term, two hours.

Construction and operation of the various steam turbines so far introduced. Superheated steam, Condensers, Forms of buckets and systems of expansion. Use in connection with compound reciprocating engines.

Water turbines, Pelton Wheels and others. Design, form of guides and buckets, Laws of Velocity, Efficiencies, Distribution of power from water-power sites. Construction of masonry and concrete dams, solid and cellular slip joints (expansion). Proper foundations for dams to secure permanency.

**M. E. 51-52. Shop Methods.**

Professor Lowndes.

Senior in M. E., first and second terms, one hour.

The object of this course is to familiarize the student with shop processes in such problems as are common in daily practice; to further the knowledge he has gained in the more elementary shop courses; to give him a clear idea of the kind of problems one meets in a modern shop; and to instruct him in the methods of attacking and solving such problems.

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**DEPARTMENT OF MILITARY SCIENCE**

LIEUTENANT-COLONEL HUBBARD.

This department was organized in 1917 to fill the pressing need of a military course to fit students to better perform their part in the national emergency, and to put the School on a par with other institutions of like grade. Thus the School is doing its full share in the work of military preparedness, while the benefits to the individual amply repay the effort and time involved. For all-round physical

development nothing has ever been devised superior to military drill and exercises.

The result of the military work is easily discernible in improved carriage, alertness of mind, improvement in physique and development of the spirit of loyalty to constituted authorities, of co-operation and team work and of organization,—all of which are important factors in the life work of any man, whether soldier or civilian. Properly followed up and developed these initial advantages should and will conduce largely to success in any calling.

Under present world conditions no man can be considered as educated who is not well grounded in the theory and practice of military science. He is thus better fitted not only to perform his duties as a citizen but also to take his place as one of the country's defenders.

The War Department has detailed an army officer in charge of the department. The military course is obligatory for all students who are physically qualified. It comprises a minimum of three hours a week for all students and five hours a week for those juniors and seniors taking the advanced course leading to a commission in the army.

**R. O. T. C. Senior Division**

Under the Act of Congress of June 3, 1916 and General Orders No. 49, War Department, 1916, a Reserve Officers' Training Corps, Senior Division, has been established at this Institution. The School of Technology thus becomes a part of the general system established throughout the country for the training of officers for our land forces. The units established at this institution are Signal Corps and Coast Artillery, both of which especially fit in with the engineering and scientific work of the School, so that a student's work in other departments contributes directly to his rating in the military department.

After two years work as above outlined, approved students may agree to take five hours a week in the military department for the remaining two years. In this case they will be paid commutation of subsistence by the Government, and after graduating satisfactorily are eligible for commissions in the Officers' Reserve Corps or as temporary second lieutenants in the Regular Army.



## DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR CRENSHAW, MR. MCKEE AND MR. CAMPOAMOR.

### General Statement

The study of modern languages at the School of Technology has a two-fold aim. Primarily, its purpose is to enable students to translate into their own tongue with ease and precision the literature which is constantly appearing in these languages on their professional subjects. Secondly, its aim is to create in the student a living interest in the literature of these languages—an interest so strong that he will continue to read the great literary masterpieces found in them.

The courses in French, German, and Spanish extend through two years, and candidates for all degrees, except that of Bachelor of Science in Textile Engineering, are required to take a two-year course in one of these languages.

The fall term of the first year is devoted to a thorough grounding in the inflections of the languages. In the winter and spring terms, the forms already learned are fixed by translating and parsing easy prose selections. Correct pronunciation is aimed at from the beginning—a correctness gained, not by rules, but from the teacher. The ear is trained by dictation, and, as far as time will permit, by conversational exercises.

During the second year, works of greater difficulty are translated, the syntax of the language is studied more thoroughly, and the sentence structure is taught by practical work, both in written and oral exercises. In both years a wider field is covered by reading one part of the work assigned, carefully and slowly, another part rapidly. Greater facility in handling the languages is also gained by frequent sight translations.

In order that the students may learn to handle the topics discussed in the current technical magazines, articles from these are assigned to members of the Senior class, and written translations are required to be made in good English, at the same time faithfully reproducing the originals.

To facilitate this work, the Modern Language Department has at its disposal a reading room where magazines and newspapers published abroad and in the United States can be freely used by students.

## DEPARTMENT OF MODERN LANGUAGES

### Courses of Instruction

#### M. L. 1. Elementary German.

*Dr. Crenshaw.*

Junior, first term, three hours.

German grammar, including the declension of nouns, adjectives, the conjugation of strong and weak verbs, the use of prepositions, the word-order in the independent sentence.

Texts: *Vos*, "Essentials of German;" *Grimm*, "Märchen."

#### M. L. 2. Elementary German.

*Dr. Crenshaw.*

Junior, second term, three hours.

German grammar, including the use of modal auxiliaries, passive voice, separably and inseparably compounded verbs, word-order in the dependent sentence.

Texts: *Vos*, "Essentials of German;" *Storm*, "Im-mensee;" *Gore*, "German Science Reader;" *Truscott & Smith*, "German Composition;" *Wilhelmi*, "Einer musz heiraten;" *Benedix*, "Eigensinn."

#### M. L. 3. Advanced German.

*Dr. Crenshaw.*

Senior, first term, three hours.

Grammar reviewed in connection with translations. Stress laid on the acquisition of a vocabulary for speaking and writing German and for translating German into English. Daily practice in German composition and German conversation.

Texts: *Wright*, "Scientific German;" *Truscott & Smith*, "German Composition;" *Bacon*, "German Composition;" *Riehl*, "Burg Neideck;" *Freytag*, "Die Journalisten."

**M. L. 4. Advanced German.**

*Dr. Crenshaw.*

Senior, second term, three hours.

German Syntax, with special reference to the structure of the sentence in connected prose. Translation of scientific German works on heat, steam, electricity, magnetism, electric motors, and steam-engine.

Texts: *Wright*, "Scientific German;" *Bacon*, "German Composition;" *Truscott & Smith*, "German Composition;" "Erfindungen und Erfahrungen;" *Müller*, "Die Elektrischen Maschinen;" Newspaper German; *Elz*, "Er ist nicht eifersüchtig;" *Goethe*, "Egmont."

**M. L. 7. Elementary French.**

*Dr. Crenshaw and Mr. Campoamor.*

Junior, first term, three hours.

French elements including: forms of nouns and adjectives, regular conjugations, use of auxiliaries "avoir" and "être," the position of the personal pronoun objects, the use of cardinals, the partitive noun and partitive genitive.

Texts: *Olmsted*, "French Grammar;" *Kuhn*, "French Reader;" *La Bedollière*, "Mère Michel y son Chat."

**M. L. 8. Elementary French.**

*Dr. Crenshaw and Mr. Campoamor.*

Junior, second term, three hours.

Grammar reviewed in connection with reading; drill on the forms of the irregular verbs, the use of tenses, relative and interrogative pronouns, passive voice, infinitive, and subjunctive mood. Daily practice in French composition and dictation.

Texts: *Olmsted*, "French Grammar;" *Dike*, "Scientific Reader;" *Kuhn*, "French Reader;" *Halévy*, "L'Abbé Constantin;" French Military Terms.

**M. L. 9. Advanced French.**

*Dr. Crenshaw and Mr. Campoamor.*

Senior, first term, three hours.

This course includes the translation of advanced literary and scientific French texts; weekly exercises in

connected French prose with special reference to French syntax; daily sight translations; French dictation; French conversation.

Texts: *Vreeland & Koren*, "French Syntax and Composition;" *Dike*, "Scientific French Reader;" Newspaper French; *Buffum*, "Contes Français;" "Courrier des États Unis;" "Bulletin de l' Union Pan-Américaine;" *Dumas* "Vingt Ans Après."

**M. L. 10. Advanced French.**

*Dr. Crenshaw and Mr. Campoamor.*

Senior, second term, three hours.

This course is a continuation of M. L. 9.

Texts: *Vreeland & Koren*, "French Syntax and Composition;" *Dike*, "Scientific French Reader," completed; *Molière*, "Le Bourgeois Gentilhomme;" "Courrier des États Unis;" "Bulletin de l' Union Pan-Américaine;" *Aubert*, "Notre Dame de Paris;" "Newspaper and Magazine French;" *Legouvè and Labiche*, "La Cigale;" French Military Terms.

**M. L. 11. Elementary French.**

*Dr. Crenshaw and Mr. Campoamor.*

Second, term, three hours.

This course is given to students who have had a year and a half of German or Spanish and is designed especially for those who may soon be called into military service and may have to go to France. It aims to teach the fundamentals of French grammar, stresses correct pronunciation, introduces the student to the geography, the climate, the government, the chief cities, rivers, canals, and railway systems of France. Dictation, conversation and military terms are stressed.

Texts: *Fraser & Squair*, "Elementary French Grammar;" *Talbot*, "Le Français et Sa Patrie."

**Spanish**

The courses in Spanish are intended to equip the student with a speaking knowledge of the language. Conversation begins practically with the first lesson and extends through-



out the course. The daily language of the home, street, newspaper, business and commerce is taught by the use of commercial readers, Spanish newspapers, Spanish magazines, Spanish conversation and Spanish composition. The fundamental differences between Castilian and American Spanish are pointed out and practice is given in the American Spanish. The whole trend of the instruction is practical.

**M. L. 13. Elementary Spanish.**

*Dr. Crenshaw and Mr. Campoamor.*

Junior, first term, three hours.

Spanish Grammar, including the forms of nouns, adjectives and pronouns; the regular conjugations; the idiomatic uses of *estar*, *hacer*, *ser*, *tener*.

Texts: *Espinosa and Allen*, "Spanish Grammar."

**M. L. 14. Elementary Spanish.**

*Dr. Crenshaw and Mr. Campoamor.*

Junior, second term, three hours.

Spanish Grammar, including position of personal pronoun objects, verbs with radical change, use of subjunctive mood, passive voice, irregular verbs. Daily practice in Spanish composition and Spanish conversation; Spanish translation.

Texts: *Espinosa & Allen*, "Spanish Grammar," *Berge-Soler & Hatheway*, Spanish-American Reader.

**M. L. 15. Advanced Spanish.**

*Dr. Crenshaw and Mr. Campoamor.*

Senior, first term, three hours.

This course is devoted to Spanish composition, Spanish conversation and to the translation of works of greater difficulty in literary and scientific Spanish. Use is made of current Spanish magazines and newspapers.

Texts: *Alarcon*, "Novelas Cortas;" *Crawford*, Spanish Composition; *Willcox*, "Scientific and Technical Spanish;" "La Revista del Mundo" (The World's Work in Spanish); "El Comercio."

**M. L. 16. Advanced Spanish.**

*Dr. Crenshaw and Mr. Campoamor.*

This course is a continuation of M. L. 15, in which the points stressed are: first, the acquisition of the vocabulary of daily life; second, Spanish conversation; the ability to write business letters in Spanish; fourth, fluency in translating commercial, technical and newspaper Spanish into good English.

Texts: *Willcox*, "Scientific and Technical Spanish;" *Waxman*, "A Trip to South America;" "La Revista del Mundo;" "El Mundo Azucarero;" "El Comercio;" "Blanco y Negro;" *Tres Comedias Modernas*; *Galdos*, "Marinela."

**DEPARTMENT OF PHYSICS**

PROFESSORS EDWARDS, \*ELLIOTT, NELMS, AND MR. STEFFEY.

**General Statement**

The aim of this department is to present the fundamental principles of Physics, the experimental basis upon which they rest, and, as far as possible, the mathematical reasoning employed in the deduction of various physical formulas. The student is not only made acquainted with certain physical laws in accordance with which physical events occur, but is taught that all physical quantities can be represented by symbols, and that certain mathematical relations exist between them, in consequence of which logical deductions can be made.

The study of Physics is taken up in a thorough and systematic way. Numerous problems are assigned in recitations, in order to familiarize the student thoroughly with the significance and practical use of the principles which he learns and the physical formulas which he sees deduced.

\*Absent on leave as instructor in School of Military Aeronautics.

### Equipment

The lecture room is provided with various facilities for experimental demonstration. By means of shades the room can be darkened when necessary; the lecture-room is provided with a water tank, water, gas, and electricity from dynamo and storage-battery. There is a good double stereopticon with arc-lamps and mechanical dissolver; also a projecting lantern with J. B. Colt automatic feed arc-lamp, supplied with vertical attachment—an accessory to a lecture-room which is indispensable for the presentation, to a large class, of a great variety of physical phenomena. The department is supplied with a polariscope for the projection on the screen of the colors of crystalline plates, and with a large collection of lantern slide for use in lectures. The outfit of apparatus for lecture experiments is large, and additions to it are constantly being made. Among the many pieces of apparatus may be mentioned: a hydraulic press, a large rotary air-pump, a Geryk air-pump, one-half horsepower motor, rotating apparatus with accessories; a mandrel for high-speed rotation, gyroscope, balances, Hero's fountain, barometers, Holtz machine, eight-inch spark Ruhmkorff induction-coil, Geissler and Crooke tubes, several X-ray tubes and fluoroscope, a battery of Leyden jars, wireless telegraph apparatus, apparatus for the mutual action of currents, tangent galvanometers, resistance boxes, thermopile, two large parabolic reflectors, lenses, concave and convex mirrors, apparatus for demonstrating the laws of reflection and refraction of light, revolving mirror and manometric capsule, several color discs, Koenig's apparatus for showing interference of sound waves, organ pipes, tuning forks, electrically driven tuning fork, siren, sonometer, spectrometer, diffraction gratings, prisms, and many other pieces.

The laboratories of the department occupy three rooms in the basement of the Academic building. One of these rooms has a floor space of 40 feet by 50 feet, and is especially well lighted. It is used for general laboratory work. The other rooms are used for experiments in light and electricity. The equipment of these laboratories is very complete, additions having been made during this year, by purchase and by construction in the school shops. For laboratory work in electricity the department is sup-

plied with a sensitive Thompson mirror galvanometer, a Siemens mirror galvanometer, two Queen reflecting galvanometers, Queen tangent galvanometer, Clark's patent tangent galvanometer, Bunnell tangent galvanometer, two very sensitive D'Arsonval galvanometers, three Rowland's patent D'Arsonval galvanometers, a large tangent galvanometer, three small D'Arsonval galvanometers, a magnetometer, a five-dial Wheatstone bridge, two P. O. box bridges, two Weston ammeters, a Weston coltmeter, fifteen resistance boxes of different sizes, a copper voltmeter, an earth-coil, a ballistic galvanometer, a standard cell, a micro-farad standard condenser, a one-half micro-farad standard condenser, two 100,000-ohm resistance boxes, Kempe discharge key, Webb discharge key, standard solenoid, a small 5,000-volt transformer, glass-plate condenser, a rotary spark-gap, a small high-frequency transformer.

The course in laboratory includes the experimental verification of physical formulas and the determination of various physical constants, and is designed to give the student practice in the use of instruments of precision and proficiency in the manipulation of physical apparatus. Among the experiments performed in this laboratory are the following: Determination of the acceleration of gravity by the physical pendulum, of the modulus of torsion of a steel wire, of the modulus of simple rigidity by torsion, of Young's modulus for steel wire, of the co-efficient of friction between two bodies, of the relation between power and load on a wheel and axle; verification of Boyle's law; determination of the radiation constant of a calorimeter, of the heat of fusion of ice, of the heat of vaporization of water, of the specific heat of metals; verification of the laws of vibrating strings by sonometer; determination of the index of refraction of glass and the distance between the lines of a diffraction grating by spectrometer; the measurement of resistance by Wheatstone bridge, of E. M. F., and resistance of batteries, of the magnetic moment of a magnet by magnetometer, of the horizontal intensity of the earth's magnetic field, of the capacity of condensers, of the temperature co-efficient of resistance of copper, of the magnetic properties of iron by ballistic galvanometer method, of resistance by double-method of the slide-wire bridge, and the location of crosses and grounds by the Murray loop method.



Carefully written reports are required on all experiments performed. These reports include the derivation of all formulas used in calculations. The application of the principles of analytical geometry to the solution of practical problems is emphasized in this course.

### Courses of Instruction

#### Phys. 5. Elementary Mechanics and Sound.

*Professor Nelms and Mr. Steffey.*

Prerequisite, Math. 15.

Sophomore, T. E., Arch., and Sp. Arch., first term, three hours.

This course is elementary and consists of recitations, problems, and lectures. The physical properties of Matter, Mechanics of Solids, Mechanics of Fluids and Sound, are included in this course. A large number of numerical problems are solved.

Text: Carhart's University Physics, Part I.

#### Phys. 6. Elementary Light, Heat, and Electricity.

*Professor Nelms.*

Prerequisite, Phys. 5.

Sophomore, T. E. and Arch., second term, three hours.

This course is a continuation of Phys. 5, Light, Heat, Electricity, and Magnetism, being treated in an elementary way.

Text: To be supplied.

#### Phys. 4. Laboratory.

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Phys. 5.

Sophomore T. E., second term, three hours.

This course is supplementary to Phys 5 and 6 for Textile Engineering students. The experiments are selected from Phys. 7 and 8.

#### Phys. 7. Laboratory.

*Professors Edwards and Nelms, and Mr. Steffey.*

Parallel Course, Phys. 5.

First Year, special E. E., first term, three hours.

This course is similar to Phys. 14, but more elementary. The experiments are on Machines, Friction, Elasticity, and Heat.

Text: Selected exercises.

#### Phys. 8. Laboratory.

*Professors Edwards and Nelms, and Mr. Steffey.*

Parallel Course, Phys. 6.

First Year, special, E. E., second term, three hours.

This course is a continuation of Phys. 7. The experiments are on Sound, Light, Magnetism, and Electricity.

Text: Selected exercises.

#### Phys. 9. Mechanics and Heat.

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Math. 18.

Sophomore, M. E., E. E., C. E., Chem., and E. Chem., first term, four hours.

A course in Kinematics, Kinetics, Elasticity, Mechanics of Fluids, and Heat. Most of the time is devoted to Kinematics and Kinetics. The algebraic method of analysis is emphasized. The solution of a large number of numerical problems is required, involving the use of the English engineers' and metric systems of units.

Text: *Reed and Guthe's "College Physics."*

#### Phys. 10. Heat and Electricity.

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Phys. 9.

Sophomore, M. E., E. E., C. E., Chem., and E. Chem., second term, four hours.

This is a continuation of Phys. 9. Heat, Electricity and Magnetism are included in this course.

Text: *Reed and Guthe's "College Physics."*

**Phys. 11. Electricity, Magnetism, Sound, and Light.**

*Professors Edwards and Nelms.*

Prerequisite, Phys. 9 and 10, Math. 25 and 26.

Junior, M. E., E. E., C. E., Chem., and E. Chem., first term, three hours.

This course is given by lectures and recitations. The fundamental principles of Electrodynamics, Electromagnetism, and Electromagnetic induction are taken up in a systematic way. The application of these principles to the dynamo and motor are explained by lectures and demonstration.

The subject of discharge of electricity through gases is given by lectures and a large number of demonstrations.

In the subject of light, special attention is given to optical instruments.

Text: *Reed and Guthe's "College Physics."*

**Phys. 14. Laboratory.**

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Phys. 9.

Sophomore, M. E., E. E., C. E., Chem., and E. Chem., second term, three consecutive hours.

This course consists of experiments, reports and instruction in the laboratory. The application of the principles of analytical geometry is emphasized. The experiments are on specific heat, heat of fusion, heat of vaporization, mechanical equivalent of heat, elasticity, friction, machines, etc.

Reference: *Nichols' "Laboratory Manual."*

**Phys. 15. Laboratory.**

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Phys. 11 and 14.

Junior, M. E., E. E., C. E., Chem., and E. Chem., first term, three consecutive hours.

This course is a continuation of Phys. 14. The experiments are on Light, Electricity, and Magnetism.

Reference: *Nichols' "Laboratory Manual."*

**Phys. 17. Laboratory.**

*Professors Edwards and Nelms, and Mr. Steffey.*

Prerequisite, Phys. 15.

Junior, E. E., first term, three hours on alternate weeks.

This course is similar to Phys. 15, but is designed for students of Electrical Engineering; the magnetic properties of iron, specific resistance, loop tests, etc., are studied.

**Phys. 20. Slide Rule.**

Parallel Course, Phys. 14.

Sophomore, M. E., E. E., C. E., Chem., E. Chem., second term, one half hour.

A thorough drill is given in the theory and use of the Mannheim Slide Rule.

**TEXTILE DEPARTMENT**

**The A. French Textile School**

PROFESSORS SEAL AND CAMP, MR. HEBDEN, MR. JONES AND MR. PHILPOTT.

**General Statement**

The Textile Department gave the first instruction in textile education south of the Mason and Dixon Line in February, 1899. The end of the first decade found the department well past the experimental stage, proceeding along well tried lines with the various phases of its curricula appreciated and fully recognized by cotton manufacturers and the public in general.

The scope of instruction has been broadened to include the very highest grades of yarn and fabrics in order to exhibit the possibilities of native resources, as well as to give technical training along textile lines.

This department now offers excellent advantages to young men who intend entering the textile industry. The department is equipped for performing every process and opera-



tion of cotton manipulation from cotton field to finished fabric, and has admirably arranged class rooms, laboratories, etc., for giving practical instruction in the sciences and the application of this knowledge along industrial lines.

A large amount of practical work is given, enabling the student to familiarize himself with all details in the design, construction and operation of the various types of the several machines and processes. The yarns required in the weaving rooms are manufactured in the carding and spinning departments, thus affording opportunity for performing the whole of every process and operation on yarn and fabric from the ginning of the seed cotton to the finished fabric.

These products are manufactured by the students, unassisted, except under the direction of skilled instructors, in as nearly mill-like manner and quantity as is consistent with best results. These products are not merely experimental samples, but are made in quantity with the quality fully up to mill standards.

### Textile Building

The Textile Building is a splendid example of architectural skill in modern mill construction. Its three floors, 150x75 feet, each, contain ample class rooms, laboratories and halls for textile equipment.

### Textile Equipment

Great care was exercised in selecting the textile equipment, for the different branches of cotton manufacture. It will be noticed, in almost every process, different forms of machines, as built by the different makers, have been installed, thus enabling the student to become familiar with the various types, as well as affording a most unusual opportunity for direct comparison.

The power for driving the machines is derived from electric motors and is transmitted by Jones and Laughlins equipment. The Sturtevant system is used for heating and ventilating, and the humidity is controlled by the American Moistening Company's system. The entire building is provided with Grinnell automatic sprinklers for fire protection and is lighted by electricity.

### Carding Department

*Ginning.*—One Winship Cotton Gin Feeder; one Winship 60-saw Cotton Gin; one Winship Condenser.

*Pickers.*—One Kitson Automatic Feeder; one Kitson Combination Breaker and Intermediate Lapper.

*Cards.*—One Saco-Lowell 40-inch Revolving Flat Card; one Whitin 40-inch Revolving Flat Card; one Howard & Bullough 40-inch Revolving Flat Card.

*Combing.*—One Dobson & Barlow Sliver Lap Machine; one Whitin Sliver Lap Machine; one Whitin Ribbon Lap Machine; one Dobson & Barlow Comber, 8 heads; one Whitin Comber, 6 heads.

*Drawing.*—One Saco-Lowell Drawing Frame, 4 deliveries, metallic rolls; one Whitin Drawing Frame, 4 deliveries, metallic rolls.

*Fly-Frames.*—One Woonsocket Slubber, 32 spindles; one Woonsocket Intermediate, 42 spindles; one Woonsocket Fine-frame, 64 spindles; one Providence Fine-frame, 64 spindles, one Saco-Pettee Jack-frame, 96 spindles.

*Miscellaneous.*—Grinding, stripping and burnishing rolls; percentage, roving and yarn scales; complete set carder's tools, sliver balance, change gears, etc.

### Spinning Department

*Ring Spinning.*—One Fales & Jenks Combination Warp and Filling Frame, 80 spindles; one Fales & Jenks Filling Frame, 80 spindles; one Saco-Lowell Combination Warp and Filling Frame 132 spindles; one Howard & Bullough Combination Warp and Filling Frame, 160 spindles; one Whitin Warp Frame, 64 spindles.

*Mule Spinning.*—One Mason Spinning Mule, 360 Spindles.

*Twisting.*—One Draper Twister, 128 spindles; one Draper Twister, 32 spindles; one Fales & Jenks Twister, 80 spindles.

*Spooling.*—One Easton & Burnham Spooler, 24 spindles; one Draper Spooler, 40 spindles; one Fairmont Presser Spooler, 12 drums.

*Winding and Reeling.*—One single spindle Universal Winding Machine; one Universal Winding Gang, 6 spindles; one Fairmount Bobbin Winder, 12 spindles; one Tompkins Reel, 50 spindles.

*Miscellaneous.*—One Week's Banding Machine; one power yarn testing machine; two Barber knotters; one twist counter; spindle sets, change gears, etc.

### Weaving Department

*Warping.*—One Entwistle Beam Warper; one Entwistle Beamer; one Draper Beam Warper; one Draper Ball Warper; one Cole Beaming Machine.

*Slashing.*—One Lowell Single Cylinder Slasher; one Lowell Size Kettle; one Lowell Size Pump.

*Hand Looms.*—Hand-weaving room, with thorough equipment of hand bobbin winders, warping pins, hecks, drawing-in frames, and 22 hand looms with 30 harness dobbies, 4 shuttles, 4 beams complete and 200 Halton Jacquard.

*Power Looms.*—One Colvin Plain Loom; six Draper Northrop Looms; one Lewiston Pillow Case Loom; one Whiting Plain Loom; one Mason Plain Loom; one Lowell Print Cloth Loom; two Kilburn-Lincoln Loom; one Mason Gingham Loom; one Crompton Gingham Loom; one Mason Dobby Loom; three Crompton Dobby Looms; two Knowles "Gem" Looms; Crompton-Thayer Dobby Loom; one Fairmount Dobby Loom; one Fairmount Loom, 600 Jacquard; one Crompton Knowles Upholstery Loom, 400 Jacquard; one Kilburn-Lincoln Dress Goods Loom, 400 Schaum & Uhlinger Jacquard; one Stafford Plain Loom; one Lewiston Wide Loom, 1,200 Halton Jacquard; one Crompton Damask Loom, 600 Jacquard.

*Finishing.*—One Curtis & Marble Railway Sewing Machine; one Curtis & Marble Brushing and Calendering Machine; one Elliott & Hall Cloth Folder; one Windle Doubling and Winding Machine; one Parks & Woolson French Napper; one American Napping Machine Co.'s French Napper,

### Dyeing Department

One Klauder-Weldon Raw Stock Dyeing Machine; one Klauder-Weldon Skein Dyeing Machine; one Textile Finishing Machinery Co.'s Chain Warp Dyeing Machine; two Chain Dyeing Machines, built in our own shops; one Draper Winding-on Machine; one Draper Winding-off Machine; one Textile Finishing Machinery Co.'s Can Chain Warp and Drying Machine; one Schaum & Uhlinger Engine-driven Hydro-extractor; one Berry Ventilating Wheel; one Granger Jigg Dyer; one Phillips Steam Chest; one Butterworth Steam Cylinder; one Dry Room; two Cypress Dye Vats, regulation depth; one set Phillips' Copper Measures; twelve small Cypress Dye Vats, fitted with steam and water for experimental dyeing.

The Dyeing Laboratory is fitted up complete for experimental dyeing, color matching, testing, and analysis. Students have access to our splendid collection of dyestuffs, dyed specimens, etc., which we believe to be as complete as any in the United States.

### Course Leading to the Degree of B. S. in Textile Engineering

The four years course in Textile Engineering was established in response to the demand for instruction in the arts and sciences directly applicable to the cotton manufacturing industry.

The course includes a sound foundation in engineering subjects, in addition to the purely textile branches. Lecture room theory is combined with laboratory practice in a very comprehensive manner.

The practical results of this well rounded course are well illustrated in the positions of trust and responsibility occupied by the alumni, by the numerous requests for their services and in the increasing number of matriculates attracted by the successful careers of former students.

It will be noticed that the course includes Mathematics, English, Chemistry, Physics, Mechanism, Mechanics, Steam Engines and Boilers, Power Transmission, Lubricants, Strength of Materials, and Shop Work; in addition to Carding, Spinning, Weaving, Bleaching, Dyeing, Finishing, Mill Construction and Equipment, Mill Economy and Practice, Drawing, and Machine Design.



## Department of Textiles

## FRESHMAN YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1.	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.5
Dr. 1	Free Hand Drawing		3	3.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing and Speaking	1		1.
Math. 11	Algebra	2		5.
Math. 15	Trigonometry	3		7.5
M. E. 3d	Wood Shop		3	3.
M. E. 5b or 7b	Smithy or Foundry			
T. E. 7	Study of Cotton and Yarn Manu- facture		3	3.
T. E. 47	Weaving Mill		3	3.
Mil. 1	Military Instruction		3	3.
Total..				45.5

## Second Term

Chem. 2	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.5
Dr. 6	Mechanical Drawing		3	3.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing and Speaking	1		1.
Math. 18	Analytic Geometry	5		12.5
M. E. 5b	Smithy or		3	3.
M. E. 7b	Foundry			
T. E. 48	Weaving Mill		3	3.
T. E. 8	Study of Cotton and Yarn Manu- facture		3	3.
Mil. 2	Military Instruction		3	3.
Total..				45.5

## SOPHOMORE YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 9	Qualitative Analysis		4	4.5
Dr. 13	Machine Drawing		3	3.
Eng. 21	American Literature	3		7.5
Eng. 27	Parallel Reading			
Ex. E. 9	Strength of Materials	3		7.5
Math. 21	Analytic Geometry	2		5.
M. E. 11b	Machine Shop		3	3.
Phys. 5	Physics	3		7.5
T. E. 9	Study of Cotton and Yarn Manu- facture		3	3.
T. E. 49	Weaving Mill		3	3.
T. E. 31	Fabric Design		3	4.
Mil. 3	Military Instruction		3	3.
Total..				51.

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 10	Qualitative Analysis		4	4.5
Dr. 14	Machine Drawing		3	3.
Eng. 24	Political Economy	3		7.5
Eng. 28	Parallel Reading			
Ex. E. 48	Materials Laboratory		3	4.
M. E. 12b	Machine Shop		3	3.
Phys. 6	Physics	3		7.5
Phys. 4	Physics Laboratory		3	4.
Phys. 20	Slide Rule			.5
T. E. 10	Study of Cotton and Yarn Manu- facture		3	3.
T. E. 50	Weaving Mill		3	3.
T. E. 32	Fabric Design		3	4.
Mil. 4	Military Instruction		3	3.
Total..				47.

## JUNIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 21	Organic Chemistry	3		7.5
Chem. 23	Organic Laboratory		3	3.
Dr. 23	Mechanism	4		10.
Eng. 31	English Literature	3		7.5
Eng. 35	Literary Thesis			
T. E. 1	Study of Cotton and Grading	3		7.5
T. E. 11	Yarn Manufacture		3	3.
T. E. 41-51	Weaving	2		8.
T. E. 33	Fabric Design		3	4.
T. E. 27	Fabric Analysis		3	4.
Mil. 5	Military Instruction		3	3.
Total..				57.5

## Second Term

Chem. 22	Organic Chemistry	3		7.5
Chem. 24	Organic Laboratory		3	3.
Dr. 22	Kinematic Drawing		3	3.
Eng. 32	English Literature	3		7.5
Eng. 36	Literary Thesis			
T. E. 2-12	Yarn Manufacture	3		10.5
T. E. 22	Dyeing Laboratory		3	3.
T. E. 42-52	Weaving	2		8.
T. E. 34	Fabric Design		3	4.
T. E. 28	Fabric Analysis		3	4.
Mil. 6	Military Instruction		3	3.
Total..				53.5

## SENIOR YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 71	Business Organization & Managem't	1		2.
Ex. E. 73	Elem. Steam Engine Laboratory		3	4.
Ex. E. 77	Heat Engines and Thermodynamics	3		7.5
T. E. 5	Mill Engineering	1		5.5
T. E. 3-13	Yarn Manufacture	3		10.5
T. E. 17	Dyeing	2		5.
T. E. 23	Dyeing Laboratory		3	3.
T. E. 37	Jacquard Design		3	3.
T. E. 43-53	Weaving	2		8.
Mil. 7	Military Instruction		3	3.
Total..				51.5

## Georgia School of Technology

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 72	Commercial Law	1		2.
E. E. 2	Applied Electricity	2		5.
E. E. 3a	Electrical Engineering Laboratory		3	3.
Ex. E. 74	Fuels and Gas Engine Laboratory		3	4.
Ex. E. 78	Thermodynamics	2		5.5
T. E. 6	Mill Engineering	1	3	5.5
T. E. 4-14	Yarn Manufacture	3	3	10.5
T. E. 18	Dyeing	2		5.
T. E. 24	Dyeing Laboratory		3	3.
T. E. 38	Jacquard Design		3	3.
T. E. 54	Weaving Mill		3	3.
Mil. 8	Military Instruction		3	3.
Total..				52.

## SPECIAL TEXTILE COURSE

## General Statement

This Course is offered to students not having the necessary time to pursue the four year course.

Fourteen (14) units are required for entrance, except in cases where the applicant has had one or more years of practical mill experience.

The course includes instruction in carding, spinning, weaving, dyeing, fabric structure, fabric analysis, Jacquard design, wood shop, smithy, foundry, machine shop, Chemistry, and English.

This course is not recommended to any student who can possibly arrange to pursue the regular course, but it is meeting the demand for a brief course, largely practical, and many former students of this course are now holding remunerative and responsible positions in textile mills.

## Special Textile Course

## FIRST YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 1	Inorganic Chemistry	3		7.5
Chem. 5	Chemical Laboratory		2	2.
Eng. 11	Rhetoric	3		7.5
Eng. 15	Theme Writing and Speaking	1		1.
M. E. 3d	Wood Shop		3	3.
M. E. 5b or 7b	Smithy or Foundry		3	3.
T. E. 1-7	Yarn Manufacture	3	3	10.5
T. E. 31	Fabric Design		3	4.
T. E. 41-47	Weaving	2	3	8.
Mil. 1	Military Instruction		3	3.
Total..				46.5

## Textile Department

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Chem. 3	Inorganic Chemistry	3		7.5
Chem. 6	Chemical Laboratory		2	2.
Eng. 12	Rhetoric	3		7.5
Eng. 16	Theme Writing and Speaking	1		1.
M. E. 5b	Smithy		3	3.
M. E. 7b	Foundry		3	3.
T. E. 2-8	Yarn Manufacture	3	3	10.5
T. E. 22	Dyeing Laboratory		3	3.
T. E. 32	Fabric Design		3	4.
T. E. 42-48	Weaving	2	3	8.
Mil. 2	Military Instruction		3	3.
Total..				49.5

## SECOND YEAR

## First Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 71	Business Organization & Managem't		1	2.
M. E. 11b	Machine Shop		3	3.
T. E. 5	Mill Engineering	1	3	5.5
T. E. 3-11	Yarn Manufacture	3	3	10.5
T. E. 17-23	Dyeing	2	3	8.
T. E. 33	Fabric Design		6	8.
T. E. 37	Jacquard Design		3	3.
T. E. 27	Fabric Analysis		3	4.
T. E. 43-51	Weaving	2	3	8.
	Military Instruction		3	3.
Total..				55.

## Second Term

Abbrev.	Subject	Hrs. Per W'k		
		Class	Lab'y	Equv.
Com. 72	Commercial Law		1	2.
M. E. 12b	Machine Shop		3	3.
T. E. 6	Mill Engineering	1	3	5.5
T. E. 4-12-13-14	Yarn Manufacture	3	9	16.5
T. E. 18-24	Dyeing	2	3	8.
T. E. 38	Jacquard Design		3	3.
T. E. 53-54	Weaving Mill		6	6.
T. E. 34	Fabric Design		3	4.
T. E. 28	Fabric Analysis		3	4.
Mil. 4	Military Instruction		3	3.
Total..				55.

## T. E. 1, 2, 3, 4. Yarn Manufacture. Theoretical.

## Professor Camp.

T. E. 1, Junior and Special I, first term, three hours.

T. E. 2, Junior and Special I, second term, three hours.

T. E. 3, Senior and Special II, first term, three hours.

T. E. 4, Senior and Special II, second term, three hours.

This work is covered by lectures, recitations from technical text books and notes, upon the machines and processes; and is given three hours per week for two years.

The work of the first year includes the study of cotton; its varieties, cultivation, ginning, grading, etc.; the special features of the various cottons; classes and numbers



of yarn for which certain cottons are most suitable; methods used by mills in buying cotton are explained. This work is followed by a study of the principles, the details of construction and operation of the machines in this department. The student is thoroughly drilled in all calculations pertaining to this machinery, including organizations for various numbers and classes of yarns.

The work of the second year is extended to include the following: combing, mule spinning, spooling, twisting, warping, reeling, winding, baling, packing, and conditioning yarn; the selection of machinery for coarse, medium and fine yarns; calculations for finding the number of the various machines needed in the equipment of a mill for making a certain kind and amount of product; specifications of the machines, and the laying out, or arranging the machines for the best results; estimate of the cost of the machinery, horsepower required, labor cost, etc.; the defects in yarns and their remedies; the sale of yarns, terms, etc.; factory laws, etc.

#### T. E. 5 and 6. Mill Engineering.

##### *Professor Camp.*

Seniors and Specials II, first and second terms, one hour lecture and three hours practice.

In this work the student combines his knowledge of engineering with that of the textile processes, in the study of mill design, construction and organization. A detailed study is made of modern types of mill buildings, including the insurance requirements, calculations, and drawings.

The different methods of driving all machines in a mill are studied, and the proper arrangement of the machines, as regards economy in power, and labor, etc.

Plumbing, heating, ventilating, humidifying, fire protection, insurance, etc., are studied.

#### T. E. 7, 8, 9, 10, 11, 12, 13, 14. Cotton Yarn Manufacture. Practical.

##### *Professor Camp and Mr. Philpott.*

T. E. 7 and 8, Freshman, first and second terms, three hours, Special I, first term, six hours.

T. E. 9 and 10, Sophomore, first and second terms, three hours, Special I, second term, six hours.

T. E. 11 and 12, Junior, first and second terms, three hours, Special II, first term, six hours.

T. E. 13 and 14, Senior, first and second terms, three hours, Special II, second term, six hours.

The practical work in Yarn Manufacture begins with the Freshman year and extends throughout the course.

The students are allowed every opportunity of acquiring a thorough knowledge of the construction and practical working of each machine. A moderate amount of time is devoted to the actual running of the different machines, so as to make them familiar with the use and operation of each machine and process.

Each student is required to ascertain such particulars as, draft, twist, weight, hank or number, speed, production, etc., at each machine in this department. Some time is spent in testing laps, slivers, rovings, and yarns, for comparing the actual with the theoretical results; indicating speeds, sizing rovings, yarns, etc., and getting up the necessary data for determining the efficiency of the machines; and the effect of different twists, humidities, and temperatures on the appearance of the strength of yarns.

Practice is afforded in taking various parts of the machines down and replacing them; grinding and setting the revolving top flat card; setting rolls, spindles, builders, etc.; making the comber settings and timings; making changes in the numbers and varieties of yarns.

Cotton matching by the Government standards is practiced sufficiently to enable the student to get some idea about classing cotton. The merit of spinnable value of cotton is also studied.

#### T. E. 17, 18. Dyeing.

##### *Mr. Jones.*

Prerequisite, Chem. 1, 2, 5, 6, T. E. 22.

Parallel, T. E. 23, 24.

T. E. 17. Senior and Special II, first term, two hours.

T. E. 18. Senior and Special II, second term, two hours.

This subject, which includes the theory of both Bleaching and Dyeing, is taught by means of recitations from text books and lectures, in conjunction with laboratory work and experiments, covering such details as the study of the physical and chemical properties of cotton, wool, silk, artificial silk and the minor fibres, chemical agents commonly made use of under above head and their application to above fibres, bleaching agents, cotton bleaching, mercerizing, water impurities and purifications, theories of dyeing, natural and artificial colors, particular attention being paid those colors of value in cotton dyeing.

The course in Dyeing is arranged in conjunction with that in Textile Chemistry, required of all textile students, the object of which is to give the student a clear idea of the fundamental principles which underlie the arts of Bleaching and Dyeing.

#### T. E. 22, 23, 24. Dyeing Laboratory.

*Mr. Jones.*

Prerequisite, Chem. 1, 2, 5, 6.

Parallel, T. E. 17, 18.

T. E. 22, Junior and Special I, second term, three hours.

T. E. 23, Senior and Special II, first term, three hours.

T. E. 24, Senior and Special II, second term, three hours.

Experimental dyeing begins the second half of the Junior and extends through the Senior year. The Junior work (T. E. 22) is in preparation for T. E. 17, 18, 23, 24, and is intended to acquaint the student with the elementary principles of Dyeing and Bleaching before taking the work up in more advanced form.

Dyeing Laboratory, includes such work as tests and experiments in: preparation of materials for bleaching and dyeing, bleaching agents and methods of bleaching, the use of mordants, fixing agents and assistants. The use and application of natural dyes and artificial coloring matters. The dyeing of single and compound shades; color mixing and shade matching. Testing of dyes for fastness and value, etc.

#### T. E. 27, 28. Fabric Analysis.

*Professor Seal.*

Prerequisites, T. E. 31, 32, 33.

Junior and Special II, first and second terms, three hours.

Instruction is first given in the various yarn standards and calculations leading to analysis. The student is provided with specimens of yarns for determination of breaking strength, count, twist, material, and cost of spinning. Specimens of fabric are then dissected for determination of weave, color arrangement, texture, quality and percentage of materials, counts of warp and filling, analysis of finish, and other technical consideration.

The more advanced work in the analysis of cloths of different character renders the student familiar with modern systems of ascertaining the exact construction of existing fabrics and compiling the data in suitable form for guidance in the reproduction of the fabrics.

In the latter part of this year the study of fabric analysis is taken up, samples of all kinds being analyzed. In this work woolen, worsted and silk fibers are touched upon as well as cotton, this being necessary in order that the student may be able to make the tests necessary to distinguish between them. This work also covers sizes and other materials which are used for their weight giving properties.

#### T. E. 31, 32, 33, 34. Fabric Design.

*Professor Seal, Mr. Jones.*

T. E. 31, Sophomore and Special I, first term, three hours.

T. E. 32, Sophomore and Special I, second term, three hours.

T. E. 33, 34, Junior and Special II, first and second terms, three hours.

The study of design covers a period of three years and is a parallel course to dobby and jacquard weaving, by which means the practical application of the theoretical design to the cloth gives a more thorough insight into the actual construction of the fabrics.



During the first year fundamental weaves and their derivatives are constructed, special attention being given to their application to the various fabrics for which they are best suited. Following this work is the combining of these weaves into designs and their application to the cloth. Methods of reduction and drawing in are then taken up, one of the main objects at this time being to get a clear understanding of the relative value of the design to the actual fabric.

The course of study laid out for the second year consists, first, of a continuation of the above; this embracing the design of the more complicated weaves such as picques, gauze and leno fabrics, ply fabrics and the actual laying out on paper of all data necessary to construct the various cloths.

#### T. E. 37, 38. Jacquard Design.

*Mr. Hebden.*

Prerequisite or Parallel, T. E. 27, 28, 31, 32, 33, 34.

T. E. 37, 38. Seniors, Special II, first and second terms, three hours.

In the third year the design of fabrics for jacquard weaving is taken up. The course covers the entire range of Jacquard work and is made as practical as seems consistent with best results. The simplest type of jacquard machine is first studied, together with the various methods of tying in the harness. After this the more complicated and larger machines are taken up before the actual work of designing is begun.

Understanding the principles and limitations of the several machines and forms of harness, the student is taught the selection of figures, the making of cloth sketches, and the symmetrical distribution after stripe, diagonal or motive arrangement. The course also covers such technicalities as the proper selection of design papers, the development of the ground and figure with the various weaves, figure shading, card stamping and lacing, casting-out, etc.

In connection with this work is the punching and lacing of the cards from the pattern, after which a sample is woven to see the results obtained. Every design made

by the student during this study of Jacquard design is placed on a machine, either hand or power loom.

#### Course of Study

First Year—Fundamental Weaves, Derivatives, Reduction and Drawing In, Simple Fabric Layouts.

Second Year—Ply Fabric Design, Leno Design, Extra Warp Effects, Fabric Analysis.

Third Year—Study of Jacquard Machine, Jacquard Designing, Card Cutting, Application of Design to Fabrics.

#### T. E. 41, 42, 43. Weaving.

*Mr. Hebden.*

T. E. 41. Junior and Special I, first term, two hours per week.

T. E. 42. Junior and Special I, second term, two hours per week.

T. E. 43. Seniors and Special II, first term, two hours per week.

Weaving recitation, beginning with the Junior year is conducted by means of lectures, and demonstrations on the equipment of power looms in the weaving laboratory, the work starting with the simplest motion and loom then working gradually through the more advanced and complicated types until a good theoretical knowledge is obtained of the principal makes of machines at use in the southern mills.

The student makes drawings of the principal parts, illustrates their use and prepares notes on the setting and timing of the same, giving causes and remedies for looms producing fabrics of faulty construction. Special attention is paid to the study of warping, slashing and the mixing of adhesives, softeners, antiseptics, and weight giving elements into sizes to yield certain characteristic results.

During this term the study of calculations necessary in the size of yarns and construction of cloth is begun, this including the counts, weight, length and reed calculations.

The construction and drawing of loom harness cams is given, first by theoretical data and later by actual

measurements from looms in the laboratory, this work including all types and forms of cams necessary for producing fabrics within their scope and limit.

In the second term Junior the work is extended to automatic looms. Let-off and take-up motion, warp and filling stop motions, feeler motions, protector and shuttle changing mechanisms, thin place preventors, etc., are studied in detail. A comparison of the various types of automatic looms for both plain and colored work are carefully studied.

Late method in yarn and fabric calculations, loom gear, belting calculations, loom speeds, etc., are carefully dwelt upon. The importance of cloth construction and all calculations necessary for the same are given careful attention.

In the Senior year dobbies, single and double index, head motion of various types, box motions and Jacquards are studied. Although this course is primarily a cotton one, at various times the subjects of silk, linen, jute, wool and worsted are touched upon as a machine adapted to that work is studied. Pattern weaving and arrangement of colors for advanced fabrics is given and all calculations pertaining to the same. Advanced loom fixing relative to machines above is given by means of lectures, this work being parallel to the course given in the weaving laboratory.

T. E. 47, 48, 49, 50, 51, 52, 53, 54. **Weaving.**

*Mr. Hebden.*

T. E. 47 and 48, Freshman, first and second terms, three hours; Special I, first term, six hours.

T. E. 49 and 50, Sophomore, first and second term, three hours; Special I, second term, six hours.

T. E. 51 and 52, Junior, first and second terms, three hours; Special II, first term, six hours.

T. E. 53 and 54, Senior, first and second terms, three hours; Special II, second term, six hours.

Instruction in weaving is given by means of lectures, demonstrations and actual practice. Recitation work consists of a study of the mechanism of the loom, careful attention being given to the construction and settings so

that the student may know the best method for producing various cloths. Parallel with this instruction is a course in cloth construction in recitation, dealing with all calculations pertaining to the layout of the cloth in the loom. This work also embraces loom and gear calculations; yarn and cloth calculations; average counts, power, belting, etc.

The instruction given in weaving is being placed more and more on an experimental basis so that the student may by actual manufacture become familiar with the different cotton fabrics.

The equipment and facilities in the weaving department are such that we are able to give each student individual attention and correct mistakes in faulty construction before the fabric to be woven is placed on the loom.

The scope of the work undertaken, the proficiency obtained and the high standard required of the finished fabrics are to the student completing this course a sound as well as a general knowledge of the application of design to fabric and fabric to loom.

### Outline of Study in Weaving

First Year, First Term—Hand Loom Weaving.

First Year, Second Term—Power Loom Weaving.

Second Year, First Term—Hand Loom Weaving of original designs.

Second Year, Second Term—Power Weaving colored work. Box loom.

Third Year, First Term—Power Weaving original designs.

Third Year, Second Term—Box Looms and Dobby Weaving.

Fourth Year, First Term—Jacquard Hand and Power Loom.

Fourth Year, Second Term—Loom Fixing.

Recitation work carried on in connection with second, third and fourth years.

T. E. 60, 61, 62, 63, 64, 66. **Industrial Teacher Training.**

T. E. 60, Juniors in Industrial Education, second term, two hours.



T. E. 61, Seniors in Industrial Education, first term, three hours.

T. E. 62, Juniors in Industrial Education, second term, three hours.

T. E. 63, Seniors in Industrial Education, first term, six hours.

T. E. 64, Seniors in Industrial Education, second term, three hours.

T. E. 66, Seniors in Industrial Education, second term, six hours.

The above courses are given only to students in Industrial Education and for the purpose of providing training in the actual operations of the textile industry. These courses differ from those of the regular courses given to engineering students in that the aim is to train men as textile operators and teachers. T. E. 60, 61, and 64 are given by lecture and recitation; T. E. 62, 63, and 66 are laboratory courses. Students may elect additional work in the Textile Mill during the Senior year.

### EMERGENCY WAR WORK

In the spring of 1917, soon after the declaration of war, the Board of Trustees of the Georgia School of Technology offered the facilities of the institution to the Government to be used for whatever emergency war-work might be deemed necessary in the national crisis.

The War Department, realizing that there was greater need than ever for continuing such technical training as the school was already giving, has not interrupted the regular courses, but has called upon the school to assist in various forms of war-work as outlined in the following pages:

#### School of Military Aeronautics

In the Spring of 1917, the War Department, through the Air Division of the Signal Corps, selected a number of Technical Universities, at which Ground Schools were to be established for the purpose of giving preparatory instruction in Military Aeronautics. The Georgia School of

Technology received the special distinction of being one of the Institutions chosen, and *The United States Army School of Military Aeronautics* was established and began work July 5th, 1917. Upon recommendation of the Schools Section, Air Division, Signal Corps—through which all business with the War Department is conducted—the President of the Georgia School of Technology designated three members of the Faculty to go to Toronto and there make a study of a Canadian School upon which our schools were, to a degree, modeled.

The executive and administrative officers are the *Commandant*, an Officer of the Army detailed by the War Department, and the *President of the Academic Board*, who is appointed by the President of the Georgia School of Technology upon the approval of the Signal Corps. The instructors are appointed by the President of the Georgia School of Technology upon the recommendation of the President of the Academic Board. The students or cadets are enlisted men of the Air Section Signal Corps, or Air Section, Signal Enlisted Reserve Corps, of the Army and are detailed to the School by the War Department.

The School of Military Aeronautics is not open to regular students of Georgia School of Technology.

The Georgia School of Technology is under contract with the Government to conduct a school as prescribed in the curriculum furnished, from time to time, by the Schools Section, Air Division of the Signal Corps. The course prescribed covers eight weeks, divided into a Junior wing of three weeks and a Senior wing of five weeks. All instruction given and information obtained by cadets in the school is strictly confidential. Quizzes and final examinations are given in all subjects, at regular intervals, and no cadet can graduate who has not passed all examinations. It is the object of the school:

1. To teach candidates their fundamental military duties and develop soldierly qualities.
2. To teach the specially technical subjects covered by the curriculum prescribed by the Signal Corps.
3. To eliminate those candidates for commission who are mentally or morally unfit.

Upon the completion of the course, candidates are recommended for such commission as they are believed to be qualified to hold.

From the beginning of the school to January 12th, 1918, the course covered preparatory instruction for Aerial Pilots, at which time a special curriculum became effective for the instruction of Supply Officers for Aviation Squadrons. This course continued throughout the life of the school, which closed May 11th, 1918.

### Organization of the School of Military Aeronautics

#### COMMANDANTS:

H. H. C. Richards, Captain, A. S. S. C., July to October, 1917.

H. H. Hawkins, Captain, A. S. Sig. R. C., October to November, 1917.

Chauncey StC. McNeill, Major, Signal Corps, November, 1917 to March, 1918.

Robert E. O'Brien, Major, Signal Corps, March to May, 1918.

#### PRESIDENTS OF ACADEMIC BOARD:

H. P. Wood, Captain, Engr. R. C., July to December, 1917.

Charles G. Eidson, 1st. Lieut., A. S. Sig. R. C., January to May, 1918.

#### STAFF:

William A. Jackson, Major, M. R. C., Surgeon.

N. R. Jones, Captain, S. R. C., Supply Officer.

James M. Tawney, 1st. Lieut., A. S. Sig. R. C., Adjutant.

Joseph O. Donovan, Captain, A. S. Sig. R. C., Disciplinary Officer.

Phil. P. Cook, 1st. Lieut., S. C., Efficiency Officer.

C. D. Kidder, 1st. Lieut., S. R. C., Assistant Supply Officer.

Dr. D. S. Elliott, Vice-President of the Academic Board.

Miss Annyedel Peek, Secretary to the President of the Academic Board.

### Faculty

#### MILITARY SUBJECTS:

Captain Edward H. Oakley, A. S. Sig. R. C., Senior Military Instructor.

Captain William A. Wiederkehr, A. S. Sig. R. C.

Captain Roland G. Blake, A. S. Sig. R. C.

First Lieutenant Wellington Arnold, A. S. Sig. R. C.

First Lieutenant Morris Berman, A. S. S. C.

First Lieutenant William T. Lynch, A. S. S. C.

First Lieutenant George R. Abel, A. S. Sig. R. C.

First Lieutenant Frank C. Hendry, A. S. S. C.

First Lieutenant Lewis H. Bailey, A. S. S. C.

First Lieutenant W. E. Waite, A. S. Sig. R. C.

First Lieutenant Thomas Fowler, A. S. Sig. R. C.

Second Lieutenant R. H. Grover, A. S. Sig. R. C.

Second Lieutenant Daniel A. Willard, A. S. Sig. R. C.

#### PRACTICAL MILITARY INSTRUCTION:

Captain John McWilliams, A. S. Sig. R. C., Head of Department.

First Lieutenant J. F. Dennis, A. S. S. C.

First Lieutenant A. L. Lynn, A. S. S. C.

Sergeant Lee Robinson, A. S. S. C.

#### SIGNALLING AND RADIO:

Dr. D. S. Elliott, Head of Department.

First Class Private, F. F. Merriam, S. E. R. C.

First Class Private, P. C. Bangs, S. E. R. C.

First Class Private T. C. Sanders, S. E. R. C.

First Class Private J. F. Andrews, S. E. R. C.

First Class Private A. D. Whittaker, S. E. R. C.

#### AIDS TO FLIGHT:

Dr. D. S. Elliott, Head of Department.

T. P. Branch, Instructor in Map Reading.

H. F. Comer, Instructor in Meteorology.



**AERIAL OBSERVATION:**

L. B. Bass, Head of Department.  
Dr. G. H. Boggs, Instructor in Photography.  
H. H. Durant.

**AIRPLANES:**

Second Lieutenant C. H. Kicklighter, Head of Department.  
Dr. D. S. Elliott, Head of Department.  
First Class Private A. W. Baker, S. E. R. C.  
First Class Private G. C. Taylor, S. E. R. C.  
Second Lieutenant P. R. Blair, A. S. Sig. R. C.  
Sergeant P. W. Parker, A. S. S. C.

**RADIO AND PHOTOGRAPHY:**

Dr. D. S. Elliott, Head of Department.  
Dr. G. H. Boggs, Instructor in Photography.  
First Class Private F. F. Merriam, S. E. R. C.  
First Class Private P. C. Bangs, S. E. R. C.  
First Class Private J. F. Andrews, S. E. R. C.  
First Class Private T. C. Sanders, S. E. R. C.

**ENGINE AND MOTOR TRANSPORT:**

Prof. R. H. Lowndes, Head of Department.  
First Class Private R. S. Howell, S. E. R. C.  
First Class Private C. W. Lytle, S. E. R. C.  
First Class Private J. R. Kruse, S. E. R. C.  
F. A. Luthey.  
First Class Private Hugh B. Moss, S. E. R. C.  
First Class Private C. D. Comer, S. E. R. C.  
P. Smith.

**GUNNERY:**

Sergeant G. N. Weston (Canadian Army), Head of Department.  
First Class Private G. W. Blackwell, S. E. R. C.  
T. R. Weems.

First Class Private W. E. Gross, S. E. R. C.  
J. H. Henika.  
First Class Private G. E. Wilson, S. E. R. C.  
First Class Private T. L. McMillan, S. E. R. C.  
First Class Private E. C. Warth, A. S. S. C.

**The Course in Radio Communication**

During the past year there has been established at this School a course in Radio Communication to train men for service in the Radio Division of the Signal Corps of the United States Army. This course is given under the direction of the Signal Corps which supplies the necessary apparatus, and, aside from giving the outline of instruction, also supplies material for instructing the students in the most advanced methods of Radio as applied at the present time in army work.

The course consisting of 25 equivalent hours per week for 15 weeks, is devoted to lectures, recitations, laboratory work and code practice. Senior students and graduates in the Electrical Engineering Course are eligible to take this work as well as senior students and graduates in the other courses who have the proper qualifications. The students are not required to enlist, but may do so if they wish, the same regulations applying as in the case of the Engineer Enlisted Reserve Corps. In order to provide sufficient time for the men to take this course certain portions of the regular work are omitted. The men are candidates for graduation, however, on the basis that this special work shall fulfill the requirements of certain of the regular courses. On successful completion of this special course, students have opportunity to enroll in an Army Radio School and subsequently become Radio Officers.

This course in Radio Communication is under the immediate charge of Prof. D. S. Elliott, of the School of Military Aeronautics, and under the general charge of the Department of Electrical Engineering.

**Wireless Telegraphy**

During the past year the Wireless Telegraph Station of the Georgia School of Technology has been used, under special dispensation of the War Department, by students

of the School of Military Aeronautics and of the Radio course given to the Senior students to train them for service in the Signal Corps of the United States Army. At the close of the war it is planned to open this station to Seniors and other qualified students who will work again under proper direction and supervision at all times.

This station has an operating room at the southwest entrance to the boiler room of the New Power Plant and Laboratory building and is equipped with apparatus and a very efficient aerial extending from the top of the 200-foot brick chimney of the new Power Plant to the tower of the Academic Building, about 300 feet distant.

Previous to the war there were a number of licensed and amateur stations in the State of Georgia, and it is planned that the station at this School will be so equipped as to be of service to these other stations when they are once more in operation.

#### **President and Faculty Members in Service**

In March, 1918, President K. G. Matheson was granted, by the Board of Trustees, a leave of absence for six months to go to France as a member of the National War-Work Council of the Overseas Department of the Young Men's Christian Association, and he is in France at the present time (April, 1918) engaged in this work. His leave will expire before the opening of the next session of the School. In his absence, Ex-Governor Harris, Chairman of the Board of Trustees is serving as executive head of the institution, with Dean Emerson as Chairman of the Faculty. In addition to the War-Work which the members of the Faculty have been doing at the School, there are a number who have enlisted for active service, and some are already at the front. Prof. Wood is a Captain in the Engineering Corps, Prof. Nesbit is a Major in the Ordnance Department, Dr. Jackson is a Major in the Medical Corps, Prof. Kirk is in Ambulance Service, and Messrs. Alexander, Clay, Burrows, G. H. McKee, and Weems are in different branches of the Service.

#### **Alumni in Service**

Attention is called to the Register of Graduates, published as a supplement to this catalog, where it may be noted that 325, over 35% of the living alumni, are known to be in active service, and that these, with few exceptions, are commissioned officers.

#### **Special Course in Auto Trucks**

At the request of Col. Clarence Deems, 521st Artillery, Camp Gordon, Ga., a course in auto truck construction and troubles was given to about twenty Commissioned and Non-Commissioned officers of this regiment during the Christmas holidays, Dec. 24 to 29, 1917.

This course consisted of a series of lectures on engines, transmission systems, carburetors and ignition systems, delivered by Professors King, Vallance and Howell of the Experimental Engineering Department. Trips were made to the plants of the Nash, Federal, White, Superior, Reo and Dodge agencies, where the cars were taken down and their construction and operation demonstrated. A Ford chassis was brought to our laboratory and demonstrated. The Quick Repair Tire Co. gave a demonstration of the care and repair of tires.

#### **Work of the Shops and Laboratories**

In addition to the War-Work outlined in the foregoing pages, a great deal of valuable service has been rendered by the School shops and laboratories; and, in this connection the work of the wood shop should be specially mentioned. This department has not only constructed miniature ranges for the course in aerial observation and other equipment for the School of Military Aeronautics, but it furnished the 321st Field Artillery, N. A. a complete duplicate of the three-inch gun, with limber, ammunition, and everything necessary for drill, including three observers' mil scale quadrants. This piece of work was so successful that it attracted a great deal of attention, and was given a special article in the Field Artillery Journal.

#### **The Intercollegiate Intelligence Bureau**

This Bureau was organized soon after the declaration of war for the purpose of assisting the various branches of the Government in obtaining the services of specially trained men for its various activities. The Georgia School of Technology became a member of this voluntary organization, and by means of data obtained from its alumni has



been in a position to render valuable assistance to graduates and to several departments of the Government.

Recently the Washington headquarters of the Bureau have been taken over by one of the departments of the Adjutant General's office, but we still maintain connection with them and stand ready to serve our former students in any way that we can.

### American University Union in Europe

In order to better provide for the welfare and comfort of college men in war service who may be on furlough in London and Paris, the Georgia School of Technology has taken membership in the American University Union, whose headquarters in Paris are at the Royal Palace Hotel, 6 Rue de Richelieu. The London Branch is located at 16 Pall Mall East, S. W. All alumni and former students are cordially invited to call at these places.

### NIGHT SCHOOL

Atlanta as a manufacturing center, has a large population of operatives, most of whom have been denied vocational training above the average standard imposed by faulty apprenticeship and financial necessity.

In addition, the expanding manufacturing interests of the city offer constantly increasing inducements to the young men who will prepare themselves for skilled labor. To meet both of above conditions, a Night School was inaugurated in the Institution March 2, 1908, and is now in successful operation.

The Night School is supported by appropriations from the City Council of Atlanta, supplemented by a small contingent fee charged each student.

The session for 1918-1919 will begin September 16, 1918, and continue in session until June 5, 1919, divided into three terms of twelve weeks each. The week beginning Dec. 22 and ending Dec. 29 will be observed as a holiday. The contingent fee for each term will be \$5.00.

Courses in Elementary English and Mathematics are offered as well as the more advanced courses in these subjects. Also special courses in Architectural and Mechanical Drawing, Steam and Gas Engines, Mechanics, Chemistry, Machine Shop Practice, Telegraphy, and the sending and receiving of messages by Wireless Telegraphy. Additional courses will be offered as occasion demands.

During the year 1917-1918, 334 students were enrolled, many of whom are now holding positions of trust and responsibility at good salaries.

For full information concerning the Night School, address,  
A. B. Morton, Dean, Ga. School of Technology.

### THE SUMMER SCHOOL

The eighteenth annual session of the Summer School will begin July 22, 1918, and continue for eight weeks. As in former years the Faculty will be chosen from members of the Faculty of the Georgia School of Technology.

The School is designed primarily to give a thorough training in some of the subjects required for examination by applicants for admission to the Freshman class of the Georgia School of Technology; and, secondly, to enable such students of the Georgia School of Technology as have incurred deficiencies in their work to remove these deficiencies and continue with their respective classes.

The instructors, by reason of their connection with the School of Technology, are particularly well fitted to know the needs of the student and to direct his work. Knowing, moreover, the demands which will be made upon him after he enters the School of Technology, they will advise him as to the class which he should prepare to enter.

Emphasis is laid on those studies which a student finds most difficult, the instructor pointing out and laying stress upon the important principles which occur in each lesson. In this way a student's mind is filled with the principles he is to use and not crowded with useless materials. Success, being largely dependent upon the individual and his fitness for and application to his work, can not be guaranteed, but is expected in the case of those who will work earnestly for it.

It must be borne in mind, however, that the Summer School is essentially a school of review, and that, as the time spent here during the summer is short at most, it is essential to success that students enter at the opening of the session.

For the subjects upon which students who wish to enter the Freshman class must pass an examination the reader is referred to the subject entitled "Admission" in this catalogue. The curriculum of the Summer School includes courses in Elementary Algebra, Plane Geometry, the class-room and laboratory work in Freshman Chemistry, Sophomore and Junior, Physics, and all courses in Mathematics offered in the Freshman, Sophomore and Junior classes, and the English courses in the Sophomore and Junior classes of the Georgia School of Technology.

Students who attend the Summer School will be given examinations immediately at its close, thus lifting anxiety from their minds and giving them an opportunity for rest before the regular session begins.

Students of the Georgia School of Technology who have deficiencies in their college work will find the Summer School an excellent place for review. The Board of Trustees, at a recent meeting, has granted the Summer School the right to give credit to students who satisfactorily review subjects in which they are deficient, or to students who wish to study with a view to advanced standing.

Such credit is given as follows: A student who is deficient shall be allowed to take in review the equivalent of three three-hour courses for one-half year. Students taking such courses will be re-

## Georgia School of Technology

garded in exactly the same light as those who repeat a subject during the regular session.

A deficiency in a five-hour subject can be removed by a double assignment of duty each day the Summer School is in session. Students who wish to take advanced standing will be allowed credit in the equivalent of two three-hour half-year courses, or one five-hour half-year course, by double assignment.

All examinations for advanced standing, or for the removal of deficiencies will occur at the close of the Summer School. By a three-hour, half-year course is meant a course which has three recitations per week for one-half the school year.

The college courses offered in the Summer School are identical in character and scope, and approximately the same in time with those offered during the regular session of the Georgia School of Technology.

The Dean of the Summer School will be glad to furnish a list of boarding places to prospective students.

Further information regarding courses and entrance requirements will be found in this catalogue, or may be had by addressing the Registrar.

Information regarding rates of tuition, length of session, and benefits of the Summer School, will be furnished upon application to Prof. A. B. Morton, Georgia School of Technology, Atlanta, Ga.

## Medical Attendance

DR. W. A. JACKSON, MISS LOIS FARR, R. N.

The Joseph Brown Whitehead Memorial Hospital has been in operation five years; and the system, instituted at its opening, has been so successful in treating the sick and conserving the health of the student body, that the same system will be in force during the coming year.

The School Surgeon is in charge of the Hospital and a trained nurse is in residence, thus insuring the very best care of the students in case of sickness. A hospital term fee of \$5.00 is charged to all students, who do not reside at home. Payment of the hospital fee entitles any student who is temporarily ill to all necessary medical and surgical treatment, without charge, by the School Surgeon, and to necessary medicine and skillful nursing by a trained nurse, in residence. This exemption from charges does not apply to chronic cases, to surgical operations, or to constitutional disorders, the cause of which existed prior to the student's enrollment.

Students not residing in the dormitories will be charged twenty-five cents for each meal served in the hospital.

Students sick with diptheria, scarlet fever, or smallpox, will be sent to the public hospitals provided for those diseases, and will pay their own board while there, but they will be entitled to free medical treatment by the school surgeon, and will be provided with the necessary medicine required for the treatment of their case, without charge.

## Societies and Student Organizations

A "Special Nurse" will be provided in those cases where the same is desired, at an additional fee covering the salary of the nurse and board, at the rate charged above. When consultation is required student will pay the fee for consultation.

Students residing at home, who desire to avail themselves of the hospital privileges will be allowed to do so by payment of the stated fee. But no student who has been in attendance the first term will be allowed this privilege the second term, except by paying the fee for both terms. A student matriculating for the second term will pay the hospital fee for that term only.

## Student Advisor System

At the beginning of the school year each student in the Freshman Class will be assigned to some member of the Faculty, who will act as his advisor during the year. Each advisor will have regular hours when the student can consult with him relative to any phase of the student life, whether in regard to his studies, his finances, his social life, his association, or any other matter which concerns him. Monthly reports are made to the Dean by advisors, showing the progress of the students in each advisor's section. It is contemplated that the number of students assigned to each advisor will not be so large as to prevent his advising frequently and fully with each one.

In case any individual member of the Faculty is desired to serve as the advisor of some particular student, this desire may be made known to the Dean, and, if practicable, arrangements will be made to comply with the desire thus expressed.

## THE LIBRARY

A \$20,000 library building, gift of Mr. Andrew Carnegie, occupies a central location on the Campus. The building has been occupied eight years, and during that time the number of volumes has increased from about 3,000 to over 12,000. It is now a well equipped Library in every way, being strongest in its scientific side, but also containing many other valuable books, especially in literature and art. Each year valuable acquisitions are made, with a view to strengthening the work of the college in each department. The Library also contains many rare books, among them a number of early 16th and 17th century volumes, the gift of ex-Governor Joseph M. Brown.

A most important feature is its number of scientific periodicals. The Library is now supplied with over one hundred of the leading papers and periodicals of this country and Europe. Each year has shown a marvelous growth over the preceding year in every way, and the entire outlook promises well for future expansion.

The Library is in the charge of a competent and thoroughly trained Librarian and her assistants. All books and pamphlets, as soon as received, are classified and catalogued in accordance with the most approved library system.

Library hours are from 8 A. M. to 6 P. M. daily, and Friday and Saturday evenings from 7 to 10.



### Atlanta Carnegie Library

In addition to the School library, students have free use of the Atlanta Carnegie Library, where they are always welcome. This library contains over 40,000 volumes. A great many books of reference have been added within the past year, among them a number of very valuable technical works which have been made available to students.

## SOCIETIES AND STUDENT ORGANIZATIONS

### Young Men's Christian Association

The Young Men's Christian Association is the largest student organization in school, in that every student is a member, and that its purpose is to serve, without partiality, the moral, social and spiritual need of each individual in the community. There is scarcely a student organization that does not, in one or many ways, come to the Y. M. C. A. for assistance, and in this way it touches the entire life of the school.

It conducts weekly devotional and special Sunday evening meetings for the students, attempts to keep them in touch with the happenings of the missionary world, conducts studies and investigations on the social problems of the times, and attempts in an effective way to supplement training afforded by the class-room curriculum. It brings prominent religious, social, and lay workers to address the student body from time to time. It is in no sense a church, nor does it attempt in any way to take the place of the church, but it does aid the various churches of the city in their attempt to reach the students here and to supplement the work they do among the students.

The most important feature of its work is the organization and conduct each year of groups for Bible study. The plan is to organize the students into congenial groups for daily and systematic study of the Bible. The leaders of these groups are students who have been coached each week before they meet their group, by a member of the Faculty or one of the Secretaries. For the past year over three hundred students have thus been engaged in the study of the Bible, and the place of such work is recognized by them as necessary to their best development.

The Association, with its excellent equipment, constitutes the real center of the student life. Its splendid new home offers a wholesome atmosphere and adequate amusement, making it unnecessary for a boy to go to the city to spend his idle hours.

In addition to the regular Tech. work, the Association has this year, opened an Army Department to take care of the enlisted men and officers in the School of Aviation that has been on our campus since July of 1917. Mr. J. H. Miller, formerly a Tech. student, has been placed in charge of this department, and extensive Army Y. M. C. A. work is being done here on the Tech. campus.

Mr. H. F. Comer, Vanderbilt University, 1912, is now closing his sixth year as General Secretary of the Association. On his working

force, for the operation of the building and the carrying-on of the organization are eleven other workers. The present force is able to serve practically every need of the student body.

## THE HONOR COURT

### Declaration of Principles

"We, the students of the Georgia School of Technology, hold that the heart of education is morality, and the essence of achievement in character. We would place honor above credits and base attainment upon desert. We believe there is no enduring reputation which is not rooted in worth and no real success which has not its foundation in manhood; that every honorable man would rather suffer failure than stoop to fraud; and that trustworthiness is the superlative asset of the engineer.

As a concrete expression of this belief we hereby pledge ourselves:

**First.** Neither to give nor to receive assistance during examinations, recitations or any work upon which we are graded.

**Second.** To report to the proper authorities any one who we have good reason to believe is guilty of giving or receiving unauthorized assistance."

The Honor System has been in successful operation at the Georgia School of Technology for several years. An Honor Court is elected from the student-body to develop and foster the right spirit in regard to the Honor System, and to conduct the trial of persons accused of violating it. The following are the members of the Honor Court:

### Members of the Honor Court

#### Seniors

W. B. Scott, President	J. L. Willet
C. B. Blackwell, Vice-President	S. J. Stubbs, Alt.
J. W. Humphreys, Secretary	J. W. Vaughan, Alt.
J. S. Budd, Sgt. at Arms	

#### Juniors

W. A. Parker	R. H. Jewell, Alt.
P. M. Betterton	J. K. Paisley, Alt.
J. H. Skeen	W. D. Houser, Alt.

#### Sophomores

S. Y. Guess	L. W. Pollard, Alt.
J. H. Dowling	F. P. Williams, Alt.

#### Freshmen

W. C. Willingham	J. P. Baskin, Alt.
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## COLLEGE ATHLETICS

### The Georgia Tech Athletic Association

DR. J. B. CRENSHAW, *Director.*

MR. J. W. HEISMAN, *Football Coach.*

MR. J. W. BEAN, *Baseball Coach.*

College Athletics at the Georgia School of Technology is managed and controlled by a Board of Directors consisting of five members of the teaching force appointed by the president, who is, ex-officio, chairman of the Board, three students, chosen by the student body, who are the president, vice-president, and secretary of the Georgia Tech. Athletic Association, and two alumni, elected by the Alumni Association. This Board aims to secure co-operation of the Faculty and the students in athletic affairs, to maintain the highest standards of sportsmanship, to give every student an opportunity to take part in some athletic activity, and to arouse in each one the desire to improve his health and physique, so as to leave school a better man physically as well as mentally. Athletics are not allowed to interfere with the proper attention to, and progress in, the courses of instruction, but every encouragement is given to participation in some form of exercise. The liberal policy adopted by the Faculty towards athletics has resulted in the greatest enthusiasm for college sports, so that the number engaged in some form of outdoor exercise is very large, over fifty per cent, and is increasing yearly. The interest shown is in the following order: football, baseball, track, tennis, basketball, swimming, golf.

### Hugh Inman Grant Field

Due to the liberality of Mr. John W. Grant, of Atlanta, the new Athletic Field, named "The Hugh Inman Grant Field," as a memorial to his son, is now finished and in constant use.

This gives us the finest Athletic Field in the South and the completion of the new concrete grand stand furnishes accommodation for seating over 6,000 spectators. The field has a quarter-mile running track, room for a 220 yard straight away track, for sprints, two baseball diamonds, two football fields, tennis court, pole vaulting and jumping paths and accommodations for all other forms of field sports.

The plans of the Field are shown in the campus view frontispiece. It is planned to erect here in the near future a gymnasium with basketball and volleyball courts, a large swimming pool, locker rooms, wrestling and boxing rooms and complete gymnastic equipment. When this is done, the students at Georgia Tech. will have the advantages of an athletic field and gymnastic equipment inferior to none in the country.

## Publications

**The Technique** is the college newspaper. It is published weekly by the students. Its purpose is to give the college news, discuss student enterprises, and to promote the general welfare of the school; to serve the institution, in short, along the same lines as the daily newspaper serves the community.

**The Blue Print**, the College Year Book, is published annually by the students, and contains the usual matters of interest relative to student life.

**The Students' Hand-Book** is published annually under the auspices of the School Y. M. C. A., contains information referring to student organizations, college customs, etc., intended primarily for new students.

The School publishes five bulletins annually, in January, April, July, August and October.

## Civil Engineering Society

Only C. E. Seniors and certain elected C. E. Juniors are eligible to membership in this society. The meetings are held bi-monthly, and are often addressed by resident or visiting engineers of well-established reputation.

## Architectural Society

All Architectural students who have completed the first term of the Sophomore year are eligible for membership. Prominent local architects frequently address the monthly meetings. Prizes are offered for the best work in Design, and a creditable library of drawings from architectural books has been formed.

## Society of Mechanical Engineers

The society is for Seniors, with a few elected Juniors to form a nucleus for the following year. The plan is to meet bi-monthly, at which meetings engineering subjects are discussed by the members, and also frequently by Engineers of experience. Special trips and outside investigations by the members are a feature of the proceedings. The Society has recently become a branch of the American Society of Mechanical Engineers.

## Emerson Chemical Society

The membership consists of the Senior, Junior and Sophomore Classes in the two Chemical Courses. The Faculty of the Chemical and Geological Departments of the School and all graduates of the Department of Chemistry are honorary members. At the weekly meetings, papers are presented by the students. Once a month the Society is addressed by members of the Faculty and by Professional Chemists.



### Electrical Engineering Society

This Society is a branch of the American Institute of Electrical Engineers.

Membership is taken from the Senior and Junior students in the Electrical Engineering Course. Original papers are presented and articles from current electrical literature are abstracted and discussed. Lectures are given the Society by practicing engineers.

### Textile Engineering Society

Senior and Junior Textile students are eligible to membership. Other students in the textile department may be elected to membership. Regular meetings are held on the first and third Wednesdays of each month at which papers are read by members. Lectures by visitors prominent in the textile industry are arranged from time to time.

## SCHOLARSHIPS AND PRIZES

### The A. French Scholarships

Mr. Aaron French, of Pittsburgh, Pa., gave three scholarships to the Georgia School of Technology, which are self-perpetuating, in that the beneficiary refunds the money after graduation in payments of small monthly notes without interest.

The conditions under which the scholarships are awarded are as follows:

1. The applicant must be at least sixteen years of age.
2. No one is eligible whose family pays taxes on more than \$3,000 worth of property. (Affidavits from city and county tax collectors to this effect are required.)
3. The scholarships are to be awarded by competitive examinations in the subjects for entrance to the Freshman Class.

### Scholarship No. 1

The competitive examination for scholarship No. 1 was held at the School in the fall of 1898, and was won by Mr. W. E. Klein, of Atlanta, who graduated in 1902. The scholarship has since been held by Mr. W. C. Appleby, of Winder, Ga., who graduated in 1906, by Mr. W. M. Fellers, of Jacksonville, Fla., who graduated in 1910, by Mr. R. S. Howell, of White Plains, Ga., who graduated in 1914, and by Mr. G. H. Sparkes, who graduated in 1915, and by Mr. H. C. Kenemer, who graduated in 1917.

### Scholarship No. 2

The competitive examination for scholarship number two was held at the school Wednesday, September 26, 1900, under the conditions

named above and was won by Mr. G. A. Harbour, of Atlanta, who graduated in 1904. It has since been held by G. W. Gibbs, of St. Augustine, Fla., who graduated in 1908, by Mr. D. S. McLaurin, of Jacksonville, Fla., who graduated in 1912, and by Mr. A. C. Strother, who graduated in 1917.

### Scholarship No. 3

The competitive examination for scholarship number 3, was held at the School September 24, 1902, and was won by Mr. Arnold Wells, of Belton, Texas, who graduated in 1906. It has since been held successively by Mr. A. J. Phillips, of McRae, Ga., who resigned before graduation, Mr. A. E. Kunze, of Newnan, Ga., who graduated in 1912, and by Mr. J. E. Thompson, who resigned before graduating, and by George Y. Brown, Jr., the present incumbent.

Scholarships Are Limited to no State or Section of the Country.

The winner of these scholarships will be furnished funds at such time as the President may think necessary for expenses, books, fees, etc., but not over \$125.00 will be furnished each year.

No formal application for entrance to the competitive examination is necessary. The presence of the applicant at the School at 9 a. m., on the opening day of the fall term, will entitle him to admission to the examinations.

### T. W. Smith Scholarship

On January 27, 1906, Mr. T. W. Smith gave a scholarship to the School, self-perpetuating on the basis of the French scholarships, and allowing the successful candidate \$150 per annum for a period of four years. In the competitive examination held September 20, 1906, Mr. M. C. Meadows, of Carrollton, Ga., won the scholarship, but left before graduation, since which time the scholarship has been allowed to lapse. The amount paid on the scholarship, however, is used as a loan fund to deserving students of limited means.

### The E. P. McBurney Scholarships

In March, 1909, Mr. E. P. McBurney, of Atlanta, established three scholarships, also self-perpetuating, on the basis of the French scholarships; beneficiaries to be appointed by the donor and president, and each scholarship to pay \$200 per year for four years.

In March, 1909, Mr. T. D. Guinn, of Cuthbert, Ga., was awarded Scholarship No. 1. He was succeeded by Mr. R. A. Clark in September, 1912, and by Mr. J. T. Mitchell in September, 1915, and by James MacDonald in September 1917.

In September, 1909, Mr. W. D. Evans, of Fort Screven, Ga., was awarded Scholarship No. 2. He was succeeded in September, 1914, by Mr. J. C. Jones, of Corinth, Miss., and by Mr. W. A. Wilcox in 1917.

In September, 1909, Mr. H. J. Crider, of St. Simon's Island, Ga., was awarded Scholarship No. 3. On his withdrawal from school June 8, 1911, Mr. W. P. Hammond, of Atlanta, was awarded the scholarship. In September, 1913, this scholarship was awarded to Mr. W. M. Hawkes, of Americus, Ga., and in September, 1916, to A. D. Whittaker, and in February, 1918, to Mr. A. S. Howell.

In July, 1913, Mr. McBurney decided to establish three additional scholarships, similar in amount and operation to the three already established by him.

In September, 1913, No. 4 was assigned to Mr. Rex Powell, Vienna, Ga., and in 1917 to Mr. E. C. Gartner.

No. 5 was assigned to L. C. Evans, of Jonesboro, Ga., in 1914 to Mr. F. L. Jones, and in 1917 to Mr. H. L. Turner.

No. 6 was assigned to Mr. G. W. Tutan, of Savannah, Ga., and in 1917 to Mr. T. H. Hall.

### The Joseph Madison High Scholarship

In October, 1910, Mrs. J. M. High, of Atlanta, established a scholarship, to be known as the Joseph Madison High Scholarship, to carry \$200 per year for four years, and to be self-perpetuating on the basis of the McBurney Scholarships. When possible, the beneficiary is to come from Morgan County, Ga., the former home of Mr. High.

On October 25, 1910, Mr. J. O. Clarke, of Atlanta, Ga., was awarded the scholarship. It has since been held by Mr. H. L. Henry, of Atlanta, and by Mr. C. W. Shackelford, of Rutledge, Ga.

### The M. R. Berry Scholarships

In July, 1913, Mrs. Fannie B. Wright, of Atlanta, established three scholarships, self-perpetuating, on the basis of the E. P. McBurney Scholarships, and named them The M. R. Berry Scholarships, in memory of her father, who for many years was an honored, influential and beloved citizen of Atlanta. In September, 1913, the following beneficiaries were appointed. No. 1, Mr. E. M. Upshaw, Rydal, Ga.; No. 2, Mr. E. E. Hardin, Monticello, Ga.; No. 3, Mr. J. M. Battson, Mt. Berry, Ga. No. 2 was later held by Mr. C. C. Jones, and No. 3 by Mr. E. T. Mathis, who succeeded Mr. H. M. Flanagan in September, 1916. In September, 1917, No. 1 was assigned to Mr. H. L. Richards; No. 2 to Mr. S. Y. Guess, and No. 3 to Mr. R. H. Taliaferro.

### The I. S. Hopkins or First President's Scholarship

In July, 1914, a friend of the School established what is to be known as The I. S. Hopkins, or First President's Scholarship. The full amount not being paid, this scholarship has been allowed to lapse and is being used as a loan fund to deserving students.

### The Architectural Scholarship

The Georgia Chapter of the American Institute of Architects has established a self-perpetuating scholarship open to students in the

two upper classes who may be in need of financial assistance. The beneficiary refunds the money after graduation in payments of small monthly notes without interest. This scholarship was last held by Mr. I. Span.

### The Ad Men's Scholarships

In February, 1915, the Ad Men's Club of Atlanta established two scholarships, one by the organization and one by personal subscriptions of certain members. These are loan scholarships, similar in operation to those described above. They went into effect in September, 1916. These scholarships are administered by the Ad Men's Club direct.

### The Clark Thornton Scholarship

In September, 1914, Mr. R. M. Angas, Mr. J. J. Apple, Mr. B. S. Brown, Mr. H. M. Corse, Mr. W. H. Cowan, Mr. F. C. Davies, Mr. J. G. Holtzclaw, Mr. H. H. Leech, Mr. O. H. Longino, Mr. L. B. Mann, Mr. G. T. Marchmont, Mr. C. W. Pittard and other members of the class of 1907 established a scholarship to be called the Clark Thornton Scholarship in memory of a former member of their class. The beneficiary of this scholarship, which is established on the basis of the E. P. McBurney scholarships, is to receive \$150 annually.

This scholarship was awarded in September, 1914, to Mr. W. T. McCullough, Jr., of Atlanta, and in 1915 to Mr. H. W. Cheney.

### The Lona Mansfield Scholarship

In September, 1916, Mr. J. B. Mansfield, of Detroit, a former student of The Georgia School of Technology established a scholarship which is to be known as The Lona Mansfield Scholarship. The beneficiary of this scholarship is to receive \$250.00 per year for four years. It is held at present by Mr. Marvin S. Wimberly, of Ft. Gaines, Ga.

### Dr. and Mrs. Thomas P. Hinman Scholarship

This scholarship was established in October, 1916, by Dr. and Mrs. Thomas P. Hinman, of Atlanta. The beneficiary of this scholarship is to receive \$200.00 per year for four years. It was held one year by Mr. W. C. Mathes, of Jonesboro, Ga. After that time the scholarship was allowed to lapse.

### The Louis Gholstin Johnson Scholarship

In October, 1917, Mr. Edwin F. Johnson, of Atlanta, established a self-perpetuating loan scholarship paying \$200.00 per year. This scholarship, which has been named, in honor of Mr. Johnson's son, The Louis Gholstin Johnson Scholarship, is now held by Mr. J. M. Robinson, of Montezuma, Ga.



### Scholarships to Local High Schools

By action of the Board of Trustees a scholarship is awarded each year to an honor graduate to each of the following public high schools in the City of Atlanta: The Technological High School, The Boys' High School, and The Fulton County High School. The scholarships pay the fees of the recipients, except the Student Activities fee, which is required of all students.

### W. L. Peel Prizes

Each year there are awarded as prizes to the ten men of the Junior Class who have attained the highest academic average for the past two and one-half years, a gold "T". These are given through the generosity of Col. W. L. Peel, of Atlanta, and are named in his honor.

### Andrews Oratorical Medal

Through the generosity of Mr. Walter P. Andrews, a public spirited citizen and a friend of the School, a handsome gold medal will be awarded each year to that member of the Freshman Class who shall deliver in public contest, during the period of Commencement, the best original oration upon some subject approved by the English department. The winner of this medal will be announced on the evening of the contest, but the presentation of it will be made at the regular Commencement Exercises.

### The Honor Society of the Phi Kappa Phi

Among the prizes offered for scholarship by the Georgia School of Technology perhaps the most coveted is membership in the honor society, Phi Kappa Phi, to which a limited number of seniors representing all departments are elected annually. Phi Kappa Phi is a national organization with branches or chapters in many Northern, Southern, Eastern and Western universities and colleges; and where ever it has been established it has proved a stimulus not only to scholarship but to all-round manhood. Its members are men of books, of affairs, and of character, its aims coinciding accurately with those of the Georgia School of Technology as set forth in the motto, "To know, to do, to be."

## GENERAL REGULATIONS

### Sessions and Terms

The session begins next to the last Wednesday in September and ends the second Wednesday in June. It will be divided into two nearly equal terms. There will be an intermission at Christmas, as indicated in the Calendar.

All students are required, and all applicants are requested to be present at the opening hour of each session, as punctuality operates to their advantage in many ways.

### Examinations

Final examinations are held at the end of each term. Students are liable to be dropped from the roll of their classes at any examination, when they do not meet the requirements, as well as at any time when they neglect their studies and fall hopelessly behind their classes. No tuition or fees are refunded under such circumstances. All examinations are written.

### Reports

Reports of the standing of students are issued at the close of each term.

Bulletin boards are placed in the halls of the Academic Building, and upon these are posted each month the grading of students as ascertained by the monthly records.

Whenever a student is deficient in any study or department at the close of any month, a report of such fact is sent to his parents.

### Tuition and Fees

All checks for fees, board, or other deposits should be made payable to The Georgia School of Technology.

By a law of the State, the fees for each term must be paid in advance before the day on which the term opens.

For students whose parents are legal residents of Georgia, and who hold county scholarships, the fees are:

First Term		Second Term	
Semi-annual fee	-----\$12.50	Semi-annual fee	-----\$12.50
Student Activities	----- 6.50	Student Activities	----- 6.50
Medical fee	----- 5.00	Medical fee	----- 5.00
Deposit for damage	----- 5.00		
	<hr/> \$29.00		<hr/> \$24.00

Each county in the State of Georgia is entitled to fifteen free scholarships. When there are over fifteen students from any county, the fifteen who shall be exempt from tuition are determined as follows: 1st. Those who have been registered longest. 2nd. From a group who have been registered an equal time, those who are in the highest class. 3rd. Class-standing shall determine the preference among those who have been here the same period of time and who are in the same class.

Students from Georgia, who do not hold county scholarships, are required to pay a tuition fee of \$12.50 per term, in addition to the fees listed above.

## Georgia School of Technology

Students whose parents are not legal residents of Georgia are required to pay a tuition fee of \$50.00 per term. They will, therefore, add \$50.00 per term to the above charges.

The Semi-annual fee of \$12.50 per term is to cover the various incidental expenses in connection with the operation of the laboratories, class rooms, and shops. It is required of all students.

The Student Activities fee of \$6.50 per term has been recently added, at the request of the Student Body and the Alumni. The payment of this fee is really a matter of economy to the student, since it covers subscription to all student publications, membership in the Y. M. C. A., membership in the Athletic Association, and a pass to all of the athletic games. This fee is collected for the student associations as a matter of accommodation. None of it goes into the School treasury.

The medical fee of \$5.00 per term is required of all students who do not reside at their homes. This fee entitles the student to the benefits of the hospital, including the services of a physician and a nurse. Chronic cases and those requiring a surgical operation are not included in the above.

Each member of the Senior Class must pay a diploma fee of \$5.00 before graduating.

Examinations at other than the regular examination times will be granted in exceptional cases only and by Faculty action. A fee of \$2.00 will be charged in all such cases.

A fee of \$2.00 will be charged to old students reporting late for registration or payment of fees, without a valid excuse.

Until the above requirements are complied with, no student will be allowed to participate in the duties and recitations of his class.

The student is advised to defer the purchase of drawing instruments and materials until he can have the direction of the professors in their selection. The prices range from \$8.00 to \$15.00.

Text books and stationery can be purchased from the School Quartermaster at reasonable rates. The student is advised, however, to bring such scientific books as he may possess. The books for a freshman usually amount to ten or twelve dollars.

No fees are refunded to students who are required to withdraw on account of conduct, or for failure in work, or who may withdraw for any reason, except for disabling sickness, properly certified to by a reputable physician. In the latter event, an equitably prorated amount will be refunded, provided the student is not able to return to the School before the end of the term in which he withdraws.

Contingent fees are not returned to any student unless he presents an order for the same from parent or guardian, saying he is to leave the School permanently. These fees are not returnable till the end of the school year.

### Deposit for Military Outfit

All students who are physically able to drill are required to wear the regulation uniform, and all new students are required to deposit on entrance \$30.00, which will cover the cost of the required outfit,

## General Regulations

which includes coat, breeches, shirt, cap and leggins. Nearly half of this amount will be refunded to all who are enrolled in the R. O. T. C. when the commutation is received from the Government. For the sake of economy and uniformity, students are advised not to purchase their uniforms before reporting.

### Dormitories\*

All students in the Freshman Class who do not reside with their parents, near relatives, or bona fide guardians legally appointed, are required to board in the School Dormitories.

This regulation was passed by the Board of Trustees, after a careful examination of the advantages and protection afforded by the dormitories to students of the Freshman class, and all such students as are physically or otherwise unable to comply with the law, will not be retained in the School.

Ordinarily two are assigned to a room, and students of the higher classes will not be accommodated in the dormitories until all eligible lower classmen have been assigned rooms. Students to the number of sixty, living in the vicinity of the School, however, will be accommodated with table board in the dining hall at the lowest co-operative price possible—the privilege to be accorded in the order of application.

### Living Expenses

The School is provided with dormitory accommodations for two hundred students. The rooms are well lighted and ventilated. Hot and cold shower baths are accessible to all students, in new and well-heated bath rooms.

Board, including laundry, fuel, and lights, is furnished at cost, and must be paid monthly in advance. The cost which depends on the prices of food, fuel, and other commodities is estimated not to exceed \$25.00 per month for 1918-19, and it is hoped that it may be kept considerably below this figure. Parents of prospective students will be given more definite information as the time for the opening of the next session approaches.

Money paid for board is not refunded to students unless they have been absent over fourteen consecutive days on account of sickness properly certified to; or unless they withdraw from school. This law is necessary on account of the dormitories being conducted under a system of fixed charges.

Any student who desires a room in the dormitories must write and secure it before reporting for duty, as the dormitories accommo-

**\*Special Note:** During the past session, the emergency War Work being done at The Georgia School of Technology required nearly all of the dormitory space available. Under present plans, all dormitories are to be open to regular freshmen in the fall of 1918. If some great emergency should demand their continued use by the Government, freshmen will be assisted in securing suitable accommodations in the vicinity of the School.



## Georgia School of Technology

date scarcely one-third of the students who are in the institution. In order to secure a room, each student must deposit \$25.00, one month's board, with the President not later than September 1st. Applications are listed in the order in which they are received. Those who apply early will be sure of a reservation. In case the student finds it impossible to enroll, the fee will be refunded provided notice is given the President not later than September 15th.

Students who board in the dormitories are required to furnish the following articles: One pillow, three pillow cases, four sheets, blankets or comforts, six towels, and other small and portable articles needed about their rooms. The articles named should be brought from home. The school furnishes with each room: Beds (single three-quarter width), mattresses, springs, wardrobe, or closet, washstand, bureau, and table.

Each student should have two suits of overalls, costing about \$1.00 each.

The cost of equipment in the Freshman year, is relatively large on account of the purchase of drawing instruments.

## Discipline and Dormitory Regulations

The students of the school have a record for good conduct unsurpassed by any corps in the country. They are required to obey but few regulations, the authorities bearing in mind the development and best interest of the student body.

Every man is expected to conduct himself in a gentlemanly manner. When he fails in this and convinces the authorities that he has not come to work, his parents are requested to withdraw him.

Special Textile students and students having but few lessons to prepare will not be admitted to the dormitories.

Patrons or prospective patrons will be furnished upon application with the printed Rules and Regulations of the School.

## Entrance Requirements

The requirements for admission to the Georgia School of Technology are as follows:

The applicant shall be not less than 16 years of age, and shall present a certificate from the last school attended, showing his scholastic record, and that he is of good moral character.

For entrance to the Freshman Class without condition, every applicant shall present 14 or more units.

At least twelve units must be offered at entrance. Units due in Mathematics and Physics shall be made up before entering the Sophomore Class. All other units due shall be made up before entering the Junior Class.

## General Regulations

### Specified Units

It is very important that all of these be presented on entrance.

English Grammar	-----1
English Rhetoric	-----1
English Classics	-----1
Elem. Algebra*	-----1½
Adv. Algebra	-----½
Plane Geometry	-----1
Solid Geometry	-----½
History	-----1
Physics or Chemistry	-----1

Total -----8½

### Optional Units

History	-----½ to 2
Civics	-----½ to 1
Latin	-----2 to 3
Greek	-----2 to 3
German	-----1 to 2
French	-----1 to 2
Spanish	-----1 to 2
Chemistry or Physics	-----½ to 1
Biology	-----½ to 1
Botany	-----½ to 1
Physiology	-----½ to 1
Phys. Geography	-----½ to 1
Gen. Science	-----½ to 1
Drawing	-----½ to 2
Commerce	-----1 to 3
Manual Training	-----½ to 2

In addition to the specified units, the applicant must present enough of the optional units to make up his total of 14 units.

Special attention is called to the required units in Algebra, as a great many students are conditioned in this subject. To receive entrance credit for the ½ unit in **Advanced Algebra** the course must have included **Logarithms, Ratio and Proportion, Binominal Theorem, Progressions, and Partial Fractions.**

We wish to urge that the students have a good command of all of the Mathematics required for entrance. It frequently happens that members of the freshman class must be turned back to review their foundation work in Algebra and Geometry.

There are two ways of presenting the units required for admission to the Georgia School of Technology.

### 1. By Examinations.

While students may enter at any time and be examined on entrance, two general entrance examinations will be held: One at the time of the final examination for the school session, and the other at the opening of the fall term. Applicants for admissions to Freshman and higher classes will be admitted to either or both of these examinations.

Candidates for Freshman Class not graduates of accredited High Schools, may stand entrance examinations at their homes about June 1st. For full particulars address the Registrar, Georgia School of Technology.

Subjects passed satisfactorily in May-June Examinations will be credited on the admission in September.

\*Students registering in the School of Commerce are not subject to the full requirements in Mathematics. They must present 1 unit in Algebra and 1 unit in plane geometry.

## Georgia School of Technology

### 2. By Certificate.

The Faculty of the Georgia School of Technology desires to bring the school into closer relations with the High Schools of the state, hoping thereby to make the transition from the latter to the former easier for the student. Therefore, the privilege of becoming accredited, by which graduates of schools can enter without examinations, is extended to those High Schools on the accredited list of the University of Georgia.

### Definition of Unit

A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. This statement is designed to afford a standard of measurement for work done in secondary schools. It takes the four-year high school course as a basis and assumes that the length of the school year will be approximately thirty-six weeks, that a period is at least forty minutes, and that the study is pursued for four or five periods a week; but, under ordinary circumstances, a satisfactory year's work in any subject can not be accomplished in less than one hundred and twenty sixty-minute hours, or their equivalent. Schools organized on a different basis can, nevertheless, estimate their work in terms of this unit. Less than forty minutes for recitation will reduce the unit value. The subject may cover more than one year, according to the pleasure of the teacher arranging courses. The time element counts on the certificate as well as the quantity of work. As a general rule, four units a year is as much as the average pupil can prepare adequately at one time.

Principals or superintendents will send to the Registrar of the Georgia School of Technology the certificate of such students in their schools as desire to enter. This should be done in June. Blank certificates may be obtained from the Registrar. The student must present himself for admission within one year after leaving the high school.

The work done by its graduates is ultimately the genuine test of the character of the preparation given by a high school. If, therefore, the students accepted from an accredited school shall be found deficient in preparation, that school must expect to be dropped from the list.

### Changes of Courses and Withdrawals

Changing from one course to another, in some special cases, is highly advisable, but if the change is merely to satisfy the foolish whim of some student it is to be discouraged. In all cases where the student wishes to change his course or to withdraw from the School, he must file written permission from his parent or guardian to this effect.

## Accredited Schools

### LIST OF ACCREDITED SECONDARY SCHOOLS OF GEORGIA AS REPORTED APRIL 1, 1918.

Application for accredited relations should be addressed to  
Professor of Secondary Education, University of Georgia.

#### FOUR-YEAR HIGH SCHOOLS.

12 to 20 Units Offered.

(Schools for Girls only are omitted.)

Acworth High School, II	J. P. Mott.
Adel High School, II	G. E. Usher.
*Albany High School, I	R. E. Brooks.
Americus High School, I	J. E. Mathis.
Ashburn High School, I	A. G. Cleveland.
*Athens High School, I	E. B. Mell.
Atlanta:	
*Boys' High School, I	W. F. Dykes.
Fulton County High School, II	Wm. Hopkins.
*Marist College, I (Private)	Peter McOscar.
*Peacock School, I (Private)	D. C. Peacock.
Technological High School, I	G. Siler.
Auburn:	
Christian Academy, I (Private)	W. A. Chastain.
Augusta:	
*Richmond Academy, I	Geo. P. Butler.
Summerville Academy, II	J. B. Lockhart.
Bainbridge High School, I	E. G. Elcan.
*Barnesville, Gordon Institute, I	E. T. Holmes.
Baxley High School, I	A. H. Moon.
Blackshear:	
Pierce Inst., II (Private)	W. A. Carlton.
Blakely High School, II	O. H. Hixon.
Boston High School, II	J. R. Ward.
Bowman: Gibson-Mercer, II (Private)	J. W. Holman.
Bowdon High School, II	N. J. Warren.
*Brunswick: Glynn Academy, I	N. H. Ballard.
Buena Vista High School, II	Ernestine Dempsey.
Calhoun High School, II	M. C. Allen.
Camilla High School, I	S. K. Tanner.
Canton High School, II	W. C. Carlton.
Carrollton High School, I	H. B. Adams.
*Cartersville High School, I	H. L. Sewell.
Cave Springs: Hearn Aca., II (Private)	W. H. McDaniel.
*Cedartown High School, I	J. E. Purks.
Chipley High School, III	R. L. Buxton.
Cochran High School, II	W. E. Monts.
College Park:	
*Ga. Mil. Acad., I (Private)	J. C. Woodward.

\*On the Southern Commission List.



# Georgia School of Technology

## Columbus:

*High School, I	T. C. Kendrick.
*Secondary Industrial School, I	J. W. Bagby.
Commerce High School, I	H. B. Carreker.
Conyers High School, II	G. W. Glausier.
Cordele:	
High School, I	H. B. Nicholson.
Ware School for Boys, II	A. F. Ware.
Covington High School, I	H. B. Robertson.
Crawfordville High School, II	R. D. McDowell.
Cuthbert High School, II	H. C. Weir.
Dallas High School, II	R. O. Binford.
Dalton High School, I	C. D. Meadows.
Darien High School, II	H. D. Cummings.
Dawson High School, I	J. C. Dukes.
Decatur High School, I	E. E. Treadwell.
Demorest: Piedmont Acad. I (Private)	J. C. Rogers.
Donaldsonville High School, II	J. T. Goree.
Douglasville High School, II	W. H. Butler.
*Dublin High School, I	Paul King.
Eastman High School, I	R. J. Strozier.
*Elberton High School, I	Theo. Rumble, Jr.
Fairburn High School, II	M. D. Collins.
*Fitzgerald High School, I	J. E. Ricketson.
Forsyth High School, I	W. O. Perritt.
*Fort Valley High School, I	Ralph Newton.
Gainesville High School, II	J. A. Mershon.
Girard High School, II	W. B. Lovett.
Grantville High School, III	R. O. Powell.
Graymont High School, I	F. A. Brinson.
*Greensboro High School, I	W. E. Queener.
Greenville High School, II	C. O. Stubbs.
*Griffin High School, I	J. A. Jones.
Harlem High School, II	J. H. Griffin.
Hartwell High School, I	C. G. Powers.
Hawkinsville High School, II	J. F. Lambert.
Hazelhurst High School, II	L. M. Wilson.
Hepzibah High School, I	H. W. Sewell.
Hiawasse Academy, II (Private)	L. B. Johnson.
Jackson High School, I	W. P. Martin.
Jefferson: Martin Institute, II	G. W. Westmoreland.
Jonesboro High School, II	R. D. Eadie.
LaFayette High School, III	W. H. McDaniel.
*LaGrange High School, I	F. F. Rowe.
Lawrenceville High School, I	F. M. Hunter.
Lithonia High School, III	W. M. Rainey.
*Locust Grove Institute, I (Private)	Claud Gray.
Loganville High School, III	T. J. Townsend.
Louisville High School, III	O. B. Trammell.
Lumpkin High School, II	G. H. Wells.
Lyons High School, III	B. L. Jordan.

\*On Southern Commission List.

# Accredited Schools

## Macon:

*Lanier High School, I	R. J. Coates.
Rutland High School, II	C. L. McClesky.
*Madison High School, I	J. H. Purks.
*Marietta High School, I	W. T. Dumas.
McDonough High School, II	M. W. Smith.
McRae: South Ga. College, I (Private)	F. G. Branch.
Maysville High School, III	H. T. Sargent.
Menlo High School, III	W. M. Rogers.
*Milledgeville: Ga. Military College, I	J. H. Marshburn.
Millen High School, III	C. B. Landrum.
Monroe High School, II	
Montezuma High School, II	J. T. Lowe.
Mount Berry:	
The Berry School, I	Martha Berry.
Mt. Vernon:	
Brewton-Parker Inst., I (Private)	Bunyan Smith.
*Moultrie High School, I	L. H. Browning.
*Newnan High School, I	B. F. Pickett.
Norman Park Institute, I (Private)	J. A. Scoggins.
Ocilla High School, II	W. T. Foster.
Oxford: Emory Academy, I (Private)	A. M. Hughlett.
Pavo High School, II	N. R. Blackman.
Pelham High School, II	T. H. Wilkinson.
*Quitman High School, I	H. D. Knowles.
Reynolds High School, III	T. H. Estes.
Richland High School, II	Knox Walker.
Rome:	
*High School, I	W. P. Jones.
*Darlington Academy, I (Private)	Geo. I. Briggs.
St. Mary's High School, II	L. C. Evans.
Sandersville High School, I	C. B. Quillian.
Sardis High School, III	J. H. Miser.
Savannah:	
*Chatham Academy, I	C. B. Gibson.
*Benedictine Col., I (Private)	F. Bernard.
Myers School II (Private)	D. M. Myers.
Senoia High School, II	J. T. Henry.
Shellman High School, II	D. S. Dennard.
Social Circle High School, II	R. L. Paine.
Sparks Collegiate Inst., I (Private)	A. W. Rees.
Sparta High School, II	J. N. Haddock.
Statesboro High School, II	R. M. Monts.
Swainsboro High School, II	C. A. Keith.
Sylvester High School, II	W. B. Fraser.
Tallapoosa High School, I	A. L. Brewer.
Tennille High School, I	W. S. Sewell.
*Thomaston: R. E. Lee Institute, I	C. W. Reid.
Thomson High School, I	N. E. Ware.
*Thomasville High School, I	B. B. Broughton.
Tifton High School, I	W. L. Bryan.
Toccoa High School, I	J. I. Allman.

\*On Southern Commission List.

## Georgia School of Technology

*Valdosta High School, I	W. O. Roberts.
Vidalia High School, II	C. A. Sydnor.
Waleska: Rheinhardt College, I (Private)	E. P. Clark.
Warrenton High School, I	G. S. Roach.
Washington High School, I	J. W. Moseley.
Waverly Hall High School, III	I. S. Ingram.
Waycross:	
*High School, I	A. G. Miller.
Piedmont Institute, I (Private)	M. O. Carpenter.
Waynesboro High School, II	Jack Lance.
West Point High School, I	W. P. Thomas.
Winder High School, I	J. P. Cash.
Woodbury High School, II	W. W. Linton.
Wrens High School, II	C. C. McCollum.
Wrightsville High School, II	Z. Whitehurst.
Statesboro: 1st Dist. Agricultural School, I	F. M. Rowan.
Tifton: 2nd Dist. Agricultural School, II	S. L. Lewis.
Americus: 3rd Dist. Agricultural School, II	J. M. Collum.
Carrollton: 4th Dist. Agricultural School, I	J. H. Melson.
Monroe: 5th Dist. Agricultural School, I	J. H. Walker.
Barnesville: 6th Dist. Ag. School, II	W. H. Maxwell.
Powder Springs: 7th Dist. Agr. School, II	H. R. Hunt.
Madison: 8th Dist. Agricultural School, I	B. F. Gay.
Clarkesville: 9th Dist. Agricultural School, II	C. A. Wells.
Granite Hill: 10th Dist. Ag. School, II	J. T. McGee.
Douglas: 11th Dist. Ag. School, II	C. W. Fraser.

## THREE-YEAR HIGH SCHOOLS.

From 10 to 12 units.

Alma High School	W. L. Sligh.
Atlanta: Commercial High School	Annie T. Wise.
Bartow High School	C. E. Anthony.
Bremen High School	R. E. Rickenbaker.
Buchanan High School	E. H. Hamby.
Brooklet High School	F. M. Gaines.
Buford High School	W. N. Nunn.
Cairo High School	T. M. Galphin, Jr.
Carnesville, High School	J. W. Smith.
Claxton High School	A. W. Strozier.
College Park High School	L. O. Freeman.
Comer High School	Paul Wheeler.
Concord High School	J. W. Davis.
Ellaville High School	S. E. Denton.
Glennville High School	J. M. Harvey.
Grayson High School	T. P. Tribble.
Hampton High School	C. S. Ward.
Hogansville High School	T. A. Clower.
Jesup High School	P. V. Rice.
Lavonia High School	Geo. H. Coleman.
Leslie High School	V. L. Broyles.

\*On Southern Commission List.

## Accredited Schools

Mansfield High School	E. N. Reynolds.
Marshallville High School	M. C. Austin.
Meigs High School	T. T. Benton.
Metter High School	O. F. Helm.
Monticello High School	Van Fletcher.
Moreland: St. Charles High School	S. R. Bratcher.
Mt. Zion Seminary (Private)	W. E. Williford.
Nashville High School	J. L. Yaden.
Palmetto High School	A. H. Stephens.
Perry High School	W. H. Martin.
Plains High School	T. J. Barrett.
Reidsville High School	G. R. Wheeler.
Rochelle High School	G. C. Watkins.
Royston High School	R. H. Moss.
Rutledge High School	O. W. Johnson.
Stillmore High School	J. C. Langston.
Stone Mountain High School	R. E. Carroll.
Sycamore High School	G. P. Hunt.
Sylvania High School	C. A. Strickland.
Unadilla High School	W. M. Connelly.
Union Point High School	C. W. Peacock.
Vienna High School	J. M. Richardson.
Villa Rica High School	Marvin Swilling.
Watkinsville High School	W. L. Downs.
Winterville High School	T. N. Gaines.



## STATEMENT REGARDING ADVANCED CREDITS

### Credits for Advanced Standing

Students from recognized colleges who desire advanced credits should see that their certificates and other evidences of work done, are such that the information required below can be obtained from them. By doing so, inconvenience and delay in entering will be avoided.

In all cases the grade made by the applicant and the required passing grade should be given. The various departments will expect detailed information as outlined below:

#### Class Room Work:

- (1) Text books used, and portions omitted, if any.
- (2) The total number of hours given to recitations.
- (3) In English courses, also, the number of themes and longer essays, and a list of the parallel reading.
- (4) In Modern Language courses, also, the amount of composition work, and the number of pages of both literary and scientific prose translated.
- (5) In courses in Drawing, also, the drawings should be submitted, each approved by the instructor.

#### Laboratory and Shop Work:

- (1) The manual used.
- (2) The total number of hours given to laboratory work, and the number of experiments required.
- (3) The note book, approved by the instructor should be submitted.
- (4) In shop work, the number of hours given to bench work, lathe work, etc., should be given, and the number of pieces of work completed.

## THE UNIVERSITY OF GEORGIA

The complete organization of the University of Georgia is as follows:

### THE UNIVERSITY AT ATHENS

#### I. Franklin College.

##### (THE COLLEGE OF ARTS)

Established in 1881, offering the Degree of Bachelor of Arts, and including: (1) General Courses in the Liberal Arts; (2) Special Courses.

#### II. The State College of Agriculture and the Mechanic Arts.

##### The College of Science.

Established in 1872, offering the Degree of Bachelor of Science, and including the following courses: (1) General Science Course; (2) Civil Engineering Course; (3) The Electrical Engineering Course; (4) The Agricultural Course; (5) The One-Year Agricultural Course; (6) The Winter Course in Agriculture; (7) The Experiment Station (at Experiment); (8) The Farmers' Institutes.

#### III. The Graduate School.

Offering the following Degrees: (1) Master of Arts; (2) Master of Science; (3) Civil and Mining Engineering.

#### IV. The Law Department.

Offering the Degree of Bachelor of Laws: Two-Years' Course.

#### V. The University Summer School.

Founded in 1903. Five Weeks' Session, offering courses in: (1) Common School Branches; (2) Pedagogy and Related Subjects; (3) High School Studies; (4) Selected College Studies.

#### VI. The School of Pharmacy.

Offering the Degree of Graduate of Pharmacy. A Two-Years' Course.

For catalogue of any of the above, write to

DAVID C. BARROW, Chancellor,  
Athens, Ga.

#### The North Georgia Agricultural College, Dahlonega, Ga.

Established 1871, offering the Degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Instruction, Bachelor of Business Science, having the following schools: Philosophy, Pedagogy, Courses in Science (including Agriculture), French, Department of Business, Military Department. For catalogue, apply to

GUSTAVUS R. GLENN, President,  
Dahlonega, Ga.

#### The Medical College, Augusta, Ga.

Established 1829. A Full Four Years' Course in Medicine.

For catalogue apply to

JOSEPH EVE ALLEN, M. D., Dean,  
Augusta, Ga.

## Georgia School of Technology

### Georgia School of Technology, Atlanta, Ga.

Established 1888, offering the Degrees of Bachelor of Science in Mechanical Engineering, in Civil Engineering, in Electrical Engineering, in Textile Engineering, in Engineering Chemistry and Chemistry, in Architecture, and in Commerce, and having the following departments: Mathematics, Engineering Chemistry, Chemistry, Mechanical Engineering, Experimental Engineering, English, Physics, Drawing, Civil Engineering, Electrical Engineering, Modern Languages, Textile Engineering, Geology, Mineralogy, Highway Engineering, Architecture, Commerce, Military Science and Industrial Education. For catalogue apply to K. G. MATHESON, President, Atlanta, Ga.

### Georgia Normal and Industrial College, Milledgeville, Ga.

(For Girls)

Established in 1889, offering the following diplomas: Normal Diplomas, Collegiate Diplomas, and the following Certificates of Proficiency: In Bookkeeping, Stenography, Dressmaking, Freehand Drawing; organized in the following departments: Normal Department, Normal and Industrial Arts, Collegiate Department, Physical Training Industrial Department, Department of Domestic Science, Department of Music and Fine Art.

For catalogue apply to MARVIN M. PARKS, President, Milledgeville, Ga.

### State Normal School, Athens, Ga.

(Co-Educational)

Established 1891, having the following courses: Common School Course, one year; Graduate School, three years; including the following schools: Literature, English, Elementary Science, Mathematics, History, Geography, Latin, Art, Educational and Manual Training, Penmanship, Psychology, Pedagogy, Domestic Science.

JERE M. POUND, President, Athens, Ga.

### The South Georgia State Normal College, Valdosta, Ga.

(For Girls)

Established 1906. An institution of collegiate rank, providing both general and special training. The courses are designed primarily to meet the needs of those who expect to fill positions as teachers in the public schools of the state.

R. H. POWELL, President, Valdosta, Ga.

### Georgia Industrial College for Colored Youths, at College, Near Savannah, Ga.

Established 1890, and organized in the following schools: English, Pedagogy, Mathematics, Science, Agriculture, Manual Training, including Mechanical Drawing, Wood Working, and Iron Working Department of Trades, Carpentry, Blacksmithing, Masonry, Painting, Tailoring, Shoemaking, Sewing.

R. R. WRIGHT, President, College, Ga.

For catalogues of the several institutions mentioned, address the presidents, whose names are given above; for catalogues of the entire university organization, address

DAVID C. BARROW, Chancellor, Athens, Ga.

## Register of Graduates

### REGISTER OF GRADUATES

To make this Register of Graduates accurate, and to keep it so is an almost impossible task, which can never be accomplished without the earnest co-operation of the Alumni themselves. This year, it has been unusually difficult, owing to the numerous changes. In many cases accurate information could not be obtained about the men in War Service. Many of these have doubtless been promoted or transferred since this information was compiled (March, '18). The matter of placing some distinctive mark by the names of men in War Service was considered, but it was not possible to draw the line. It may be noted that over 30% of the Alumni are in War Service, most of whom are commissioned officers. The Registrar wishes to thank most cordially those who have assisted him this year, and to urge every one to send him corrections at any time.

#### ADVANCED DEGREES.

Blackburn, Bryan Martin, B.S. in M.E., '04, M.E., '14. Design of a 225 Hp. Boiler.

Chapman, John Gresham, B.S. in T.E., '09; T.E., '15. The management of a Knitting Yarn Mill.

Patterson, Eugene Clifford, B.S. in M.E., '03; M.E., '14. Estimate Design and Construction of 19 Sulphuric Acid Tanks.

Stephens, Phinehas Varnum, B.S. in E.E., '03; M.E., '14. An Original Test on the 14-inch Main Steam Headers of the Waterside Station No. 1 of the New York Edison Co., involving the invention of the Flexometograph.

Teague, Newton Nesbit, B. S. in M.E., '12; E.E., '17. The Operation of a Public Utility.

#### CLASS OF 1890.

Crawford, Geo. G., B.S. in M.E. President Tennessee Coal, Iron and Railroad Co., Birmingham, Ala.

Smith, Henry L., B.S. in M.E. President and Treasurer M. D. & H. L. Smith Co., Dalton, Ga.

#### CLASS OF 1891.

Brooks, Percy C., B.S. in M.E. E. & T. Fairbanks Co., St. Johnsbury, Vt.

DeGive, Julius L., B.S. in M.E. Manager of Advertising and Operation of Theatres, Atlanta, Ga.

Glenn, W. H., B.S. in M.E. Vice-President and Operating Manager Georgia Railway & Power Co., Atlanta, Ga.

Goldsmith, J. D., B.S. in M.E. With Southern Railway Shops, Atlanta, Ga.

Jones, John H., B.S. in M.E. General Superintendent Durham Coal & Iron Co., address, James Building, Chattanooga, Tenn.

McCrary, J. B., B.S. in M.E. J. B. McCrary & Co., Consulting Engineers, Water, Lights, Sewerage, Third National Bank Building, Atlanta, Ga.

Moore, J. S., B.S. in M.E. Deceased.

Pritchett, C. M., B.S. in M.E. Superintendent of Construction, Treasury Department, Washington, D. C.



CLASS OF 1892.

- Ard, C. E., B.S. in M.E. Manager Bosworth-Ard Machine & Foundry Co., Anniston, Ala.  
 Bridge, J. W., B.S. in M.E. Deceased.  
 Colcord, A.R., B.S. in M.E. President Colcord Lumber Co., Atlanta, Ga.  
 Collins, E. W., B.S. in M.E. Construction Engineer J. B. McCrary Co., Atlanta, Ga., address 115 Broyles St.  
 Davis, E. H., B.S. in M.E. State Highway Engineer, Griffin, Ga.  
 Fairbanks, C. E., B.S. in M.E. General Manager and Director Scott Paper Co., Chester, Pa.  
 Freeman, George, B.S. in M.E. Deceased.  
 Hansell, Wm. A., Jr., B.S. in M.E. Superintendent Public Works, Fulton County, Court House, Atlanta, Ga.  
 Hudson, N. B., B.S. in M.E. Sales Agent R. D. Cole Mfg. Co., Newnan, Ga.  
 Johnson, Mark W., Jr., B.S. in M.E. Engineer in Charge Pratt Engineering & Machine Co., 25 W. 44th St., New York City.  
 Little, C. B., B.S. in M.E. Chief Engineer, Brownell Mfg. Co., Engines and Boilers, Dayton, O.  
 Pearson, M. M., B.S. in M.E. Draughtsman, General Electric Co., Schenectady, N. Y.  
 Rossman, Jas. Gardner, B.S. in M.E. Public Utilities, 60 Wall Street, New York, N. Y.  
 Scully, T. F., B.S. in M.E. Deceased.  
 Sherard, J. B., B.S. in M.E. Deceased.  
 Walthall, W. P., B.S. in M.E. Salesman, with Forest and George Adair, Atlanta.  
 Whitehurst, Z., B.S. in M.E. Owner Our Mills, Dublin, Ga.  
 Whitney, F. E., B.S. in M.E. Treasurer, General Manager, Commercial Truck Co. of America, Philadelphia, Pa., 27th and Brown Sts.

CLASS OF 1893.

- Black, A. D., B.S. in M.E. Assistant Engineer, District Engineer Corps, District of Columbia, Washington, D. C.  
 Davis, E. E., B.S. in M.E. Deceased.  
 Davis, R. W., B.S. in M.E. So. Agent (Manager), Saco-Lowell Shops, Realty Building, Charlotte, N. C.  
 Jeter, S. F., B.S. in M.E. Chief Engineer, Hartford Steam Boiler Inspection and Insurance Co., Hartford, Conn.  
 Little, Joe W., B.S. in M.E. Estimator and Salesman, Russell Electric Co., Atlanta, Ga.  
 Long, H. L., Jr., B.S. in M.E. Physician, Leesburg, Ga.  
 McRae, M. W., B.S. in M.E. Address, care Mr. Geo. McRae, Eastman, Ga.  
 Miles, H. H., B.S. in M.E. Vice-President of the Georgia Marble Co., 1328 Broadway, New York, N. Y.  
 Murray, A. R., B.S. in M.E. Chief Draughtsman, The Cincinnati Shaper Co.; Designer for the Cincinnati Gear Cutting Machine Co., Cincinnati, O.  
 Nally, W. J., B.S. in M.E. Consulting, Mechanical and Civil Engineer, 919 Austell Building, Atlanta, Ga.

- Nowell, H. G., B.S. in M.E. Attorney-at-law. Trustee Georgia School of Technology; address, Monroe, Ga.  
 Phillips, H. T., B.S. in M.E. President Phillips & Crew Co., 82 N. Pryor Street, Atlanta, Ga.  
 Pritchett, Wm. H., B.S. in M.E. First Lieutenant United States Navy.  
 Wells, Arthur P., B.S. in M.E. Engineer of Tests, Central of Georgia Railway, Savannah, Ga.

CLASS OF 1894.

- Connor, W. O., Jr., B.S. in M.E. Superintendent, New Mexico School for the Deaf, Santa Fe, New Mexico.  
 Duggan, D. E., B.S. in M.E. Lessee of the Henry Cotton Mills, Hawkinsville, Ga.  
 Forrest, G. F., B.S. in M.E. Deceased.  
 Greene, E. A., B.S. in M.E. Major U. S. Marine Corps; address, care of Postmaster, New York City.  
 Holmes, T., B.S. in M.E. Lumber Manufacturer, Lawley, Ala.  
 Hunter, W. W., B.S. in M.E. Assistant Engineer, River and Canal Commission, Augusta, Ga.; address, City Hall.  
 Merry, E. B., B.S. in M.E. President and General Manager Merry Bros., Inc., Augusta, Ga.  
 Ogletree, P., B.S. in M.E. Fruit Growing, Cornelia, Ga.  
 Whitney, E. R., B.S. in M.E. President Commercial Truck Co. of America, 27th and Brown Streets, Philadelphia, Pa.

CLASS OF 1895.

- Allen, S. W., B.S. in M.E. Unknown.  
 Almand, J. A., B.S. in M.E. Deceased.  
 Clark, H. W., B.S. in M.E. Secretary and Treasurer Sutherland Mfg. Co., Augusta, Ga.  
 Goldsmith, J. M., Jr., B.S. in M.E. Inspector Fidelity & Casualty Co. of New York, 312 Grant Building, Atlanta, Ga.  
 Harrison, G. H., B.S. in M.E. Southern Cotton Oil Co., Atlanta, Ga.  
 Jessop, Wm., B.S. in M.E. Vice-President Bradbury Marble Co., St. Louis, Mo.  
 Lovette, J. F., B.S. in M.E. Accountant A. B. & A. R. R. Co., Atlanta, Ga.  
 McCall, C. W., B.S. in M.E. Cashier, Pearce & Battey, Cotton and Naval Stores Factors, Savannah, Ga.  
 Nunnally, W. B., B.S. in M.E. Farming, R. F. D. No. 2, Monroe, Ga.  
 Oetjen, T. F., B.S. in M.E. Civil Engineer in charge of the Cardenas Division, United Railways of Havana, Cardenas, Cuba.  
 Smith, J. E., B.S. in M.E. President and Treasurer John M. Smith Co., Automobiles, Atlanta, Ga.  
 Towers, R. N., B.S. in M.E. President and General Manager Rome Machine and Foundry Co., Rome, Ga.

CLASS OF 1896.

- Eckels, Geo. Z., B.S. in M.E. Lieutenant, Quartermaster Corps, U. S. Army, West Point, N. Y.  
 Gibbons, J. F., B.S. in M.E. Superintendent Bauxite Mining and Milling, Norton Co., Bauxite, Ark.  
 Hart, H. R., B.S. in M.E. Deceased.

## Georgia School of Technology

- Hill, Chas. W., B.S. in M.E. Manager, C. W. Hill & Co., 901 Woodward Building, Birmingham, Ala.  
 Reynolds, H. C., B.S. in M.E. Electrician and Inspector, Southeastern Underwriters' Association, also President Sunset Orchard; address, 814 VanAntwerp Building, Mobile, Ala.  
 Thompson, Thos. P., B.S. in M.E. Partner, Neff & Thompson, Architects and Engineers, Norfolk, Va.  
 Tufts, R. B., B.S. in M.E. Tufts & Lowe, Engineers and Contractors, Norfolk, Va., Anderson, S. C.; address, box 1272, Richmond, Va.  
 Whitney, A. B., B.S. in M.E. Deceased.  
 Wikle, J. T., B.S. in M.E. Mechanical Engineer and Purchasing Agent, Fulton Bag & Cotton Mills, Atlanta, Ga.  
 Wilson, B. N., B.S. in M.E. Professor Experimental Engineering and Drawing, University of Arkansas, Fayetteville, Ark.

### CLASS OF 1897.

- Corput, Rex Van Den, B.S. in M.E. Major C. A. C., A. E. F.  
 Crumley, R. M., B.S. in M.E. Vice-President Crumley-Sharp Hardware Co., Atlanta, Ga.  
 Furlow, F. C., B.S. in M.E. President Otis Elevator Co., 17 Battery Place, New York.  
 Huff, E. F., B.S. in M.E. Public Accountant with Alonzo Richardson & Co., Empire Building, Atlanta, Ga.  
 Nash, Walter D., B.S. in M.E. President Atlanta Utility Works, East Point, Ga.  
 Ogletree, J. F., Jr., B.S. in M.E. Farming, Durand, Ga.  
 Park, H. P., B.S. in M.E. President Park Mills, LaGrange, Ga.  
 Reynolds, A. L., B.S. in M.E. President A. L. & C. F. Reynolds Mercantile Corporation, Mayfield, Ga.; President Ogeechee Fertilizer Co.; President Sparta Lumber Co., Sparta, Ga.  
 Wight, E. L., Jr., B.S. in M.E. Sec. & Treas., Atl. Wholesale Jewelry Co., Atlanta, Ga.; address, 21 E. 8th Street, City.

### CLASS OF 1898.

- Bulloch, S. A., B.S. in E.E. President and General Manager, Eufaula Hardware Co., Eufaula, Ala.  
 Crawford, J. C., B.S. in E.E. Deceased.  
 Everett, W. B., B.S. in E.E. Deceased.  
 Garlington, J. C., B.S. in M.E. Farming, Calhoun, Ga.  
 Hall, J. O., B.S. in E.E. Electrician Western Electric Co., Atlanta, Ga.  
 Hart, R. H., B.S. in E.E. Draftsman Armour Fertilizer Co.; address, Box 148, Route 8, Atlanta, Ga.  
 Honiker, C. D., B.S. in E.E. Chief Cost Accountant, Fulton Bag and Cotton Mills, Atlanta, Ga.  
 Peek, H. H., B.S. in M.E. Manager, Sec. and Treas. of Lookout Boiler and Manufacturing Co., Chattanooga, Tenn.  
 Seawell, B. W., B.S. in M.E. Engineer, Chile Exploration Co., 170 84th St., Brooklyn, N. Y.  
 Wales, P. G., B.S. in M.E. Major, U. S. Army, Retired, Menlo Park, Cal.

Casses of 1899, 1900, '01

### CLASS OF 1899.

- Binford, C. M., B.S. in E.E. Superintendent, Elkhorn Coal Mining Co., Stanaford, W. Va.  
 Camp, L. R., B.S. in M.E. District Engineer, Southern Cotton Oil Co., Montgomery, Ala.  
 Gibbes, T. M., B.S. in E.E. Manager New Business Dept., Appalachian Power Co., Bluefield, W. Va.  
 Harby, J. M., B.S. in M.E. General Contractor, Sumter, S. C.  
 Jackson, Percy, B.S. in M.E. Chief Engineer with Walsh & Weidener Mfg. Co., Chattanooga, Tenn.  
 Leigh, W., B.S. in M.E. Lubrication Engineer, The Texas Co., 17 Battery Place, New York, N. Y.  
 Lowe, J. H., B.S. in M.E. Tufts & Lowe, Engineers and Contractors, Anderson, S. C.; address, Box 1272, Richmond, Va.  
 Moses, P., Jr., B.S. in M.E. Manager Palmetto Gin Ins. Co.; Manager Fidelity Gin Ins. Co.; General Agent Penn Mutual Life Ins. Co., Sumter, S. C.  
 Ruse, C. L., B.S. in M.E. State Agent Aetna Insurance Co., Trust Co. of Georgia Building, Atlanta, Ga.  
 Terrell, C. D., B.S. in E.E. Vice-President and General Manager The H. D. Terrell Land Co., Americus, Ga.  
 Turner, Frank C., B.S. in M.E. Representative, Southern Wheel Co., Birmingham, Ala.

### CLASS OF 1900.

- Binford, R. J., B.S. in E.E. Commercial Dept., General Electric Co., Witherspoon Building, Philadelphia, Pa.  
 Freeman, H. L., B.S. in E.E. Professor of Mechanical Engineering, Mississippi Agricultural & Mechanical College, Miss.  
 Jones, C. S., B.S. in M.E. Professional Building, 131 Allen Street, Buffalo, N. Y.  
 Lamar, P. R., B.S. in M.E. District Manager Southern Cotton Oil Co., Empire Building, Atlanta, Ga.  
 Rich, S. L., B.S. in E.E. Sec. & Treas., Evans Rich Mfg. Co., St. Louis.  
 Skalowski, A., B.S. in M.E. General Manager Santa Monica Bay Home Telephone Co., Santa Monica, Cal.  
 Williams, E. P., B.S. in E.E. Deceased.  
 Wright, C. S., B.S. in M.E. Calhoun, Ga.  
 Wynne, W. R., B.S. in M.E. Sec.-Treas., Office Mgr., F. A. Wynne Adv. Co.; address, Box 89, Dallas, Texas.

### CLASS OF 1901.

- Benjamin, J. P., B.S. in M.E. Manager J. S. Pinkusohn Cigar Co., Jacksonville, Fla.  
 Camp, E. W., B.S. in T.E. Associate Professor of Textile Engineering, Georgia School of Technology, Atlanta, Ga.  
 Dougherty, D. O., B.S. in E.E. 19 Prado, Atlanta, Ga.  
 Gay, Ewell, B.S. in M.E. Asst. Mgr. So. Department, Insurance Co. of North America, Philadelphia Underwriters' and Alliance Insurance Co., Philadelphia, Trust Co. of Ga. Bldg., Atlanta, Ga.



Holman, W. J., B.S. in E.E. Manager Water & Light Plant, Paris, Tenn.  
 Holtzclaw, B. W., B.S. in M.E. Chief Engineer, J. S. Scofield's Sons Co., 154 Summit Ave., Macon, Ga.  
 Hughes, W. D., B.S. in T.E. Adjuster, Southern Adjustment Bureau, 715 Trust Co. of Ga. Bldg., Atlanta, Ga.  
 Langston, Wade, B.S. in T.E. American Car & Foundry Co., 165 Broadway, New York.  
 Mead, A. S., B.S. in T.E. Vice-President, Nye-Mead-McDowell Co., Riverside, Cal.  
 Merritt, G. J., B.S. in M.E. Sales Engineer, Westinghouse Electric & Mfg. Co., 165 Broadway, New York.  
 Moore, J. Wayne, B.S. in M.E. Vice-President Atlanta Utility Works, East Point, Ga.  
 Newsom, Willard, B.S. in M.E. Manager Machinery Dept., McGowin-Lyons Hdw. and Sup. Co., Box 786, Mobile, Ala.  
 Sullivan, W. P., B.S. in M.E. Captain Company "E", 105th Engineers, U. S. R., Norfolk, Va.  
 Swords, L. C., B.S. in T.E. Cashier, J. B. Swords Bank, Swords, Ga.  
 Towers, J. F., B.S. in M.E. Asst. Supt. Coke Plant, Illinois Steel Co., Gary, Ind.  
 Waterman, J. S., B.S. in M.E.  
 Williams, J. Howard, B.S. in M.E. Mech. Engineer, Board of Water Supply, New York City, Room 2205, Municipal Building.

## CLASS OF 1902.

Anthony, J. T., B.S. in T.E. Asst. to President, American Arch. Co., 30 Church Street, New York.  
 Bacon, E. H., B.S. in T.E. President Bacon-Ryerson Co., Jacksonville, Fla.  
 Berry, M. R., B.S. in M.E. President, Electric Products Co., 1067 E. 152nd St., Cleveland, Ohio.  
 Hardeman, I., B.S. in T.E. Sales Engineer, 816 Realty Building, Charlotte, N. C.  
 Hicks, R. L., B.S. in M.E. Mech. Engineer, Gulf States Steel Co., Alabama City, Ala.  
 Hochstrasser, M. T., B.S. in M.E. Skilled Draughtsman, Office of Chief of Ordnance, Washington, D. C.  
 Johnson, Folger, B.S. in T.E. Architect, 207 Oregon Bldg., Portland, Ore.  
 Jones, A. A., B.S. in T.E. Mgr. Decatur Fertilizer Co., Decatur, Ala.  
 Kicklighter, Chas. H., B.S. in M.E. Second Lieut. Signal R. C. A. S., School of Military Aeronautics.  
 Klein, E. W., B.S. in M.E. Sales Engineer, Bishop-Babcock-Becker Co., 60 W. Mitchell St., City.  
 Lawrence, McDonald, B.S. in C.E. Municipal Engineering & Construction Co., Empire Building, Atlanta, Ga.  
 McKenney, P. K., B. S. in T.E. Treasurer and General Manager Texas Cotton Mills Co., McKinney, Texas.  
 Merry, R. G., B.S. in M.E. Gen. Manager, Merry Steel Truck Co.; Manager Plant No. 6, Ga-Carolina Brick Co., Augusta, Ga.  
 Morton, A. H., B.S. in M.E. Jr. Asst. Field Engineer, Interstate Commerce Commission, Municipal Building, Chattanooga, Tenn.

Norcross, P. H., B.S. in T.E. Supervising Engineer, U. S. War Dept., Cantonment Div. War Dept., Washington, D. C.  
 Paulsen, J. H., B.S. in M.E. Assistant Manager Propeller Tow Boat Co., Savannah, Ga.  
 Prioleau, J., B.S. in T.E. Special Agent, St. Paul F. & M. Ins. Co., Gazette Building, Little Rock, Ark.  
 Rainey, C. W., B.S. in T.E. Superintendent Light and Water Plant, Dothan, Ala.  
 Smith, M. G., B.S. in M.E. Sou. Representative for Jones & Laughlin Steel Co., Greenville, S. C.  
 Strickland, H. L., B.S. in M.E.  
 Thompson, T. M., B.S. in M.E. Southern Representative Triumph Ice Machine Co., 912 Healey Building, Atlanta, Ga.  
 Towers, D. D., B.S. in T.E. Gen. Supt. Mt. Vernon-Woodberry Mills, Inc., Box 9, Station M, Baltimore, Md.  
 West, J. G., Jr., B.S. in T.E. Jones & Laughlin Steel Co., Pittsburg, Pa.; address, Woodlawn, Pa.  
 Wey, H. B., B.S. in M.E. Captain Signal Reserve Corps, Company "B", 318th Field Signal Battalion.  
 Yankey, L. G., B.S. in T.E. Brunswick Drug Co., 639 S. Grand Ave., Los Angeles, Cal.

## CLASS OF 1903.

Atkinson, H. W., B.S. in T.E. Assistant Superintendent, Muscogee Mfg. Co., 204 11th St., Columbus, Ga.  
 Ball, H. O., B.S. in T.E. Superintendent and Manager, Pepperton Cotton Mills, Jackson, Ga.  
 Bell, F. G., Jr., B.S. in T.E. Sou. Sales Agent, Am. Moistening Co., 811 Empire Building, City.  
 Cannon, P. E., B.S. in T.E. Agent and Salesman, Gulf Refining Co., Laurens, S. C.  
 Cochran, B. W., B.S. in E.E. Palmetto, Ga.  
 Cook, J. C., B.S. in E.E. Vice-President and Chief Engineer, The J. B. McCrary Co., Atlanta, Ga., Third National Bank Building.  
 Dayton, A. O. B.S. in E. E. With St. Petersburg Lighting Co., St. Petersburg, Fla.  
 Evans, H. O., B.S. in T.E. Salesman Republic Rubber Co., 2014 Commerce Street, Dallas, Texas.  
 Fambrough, W. M., B.S. in E.E. Unknown.  
 Freeman, M. L., B.S. in T.E. Associate Professor of Drawing, Mississippi A. & M. College, Agricultural College, Miss.  
 Furlow, Felder, B.S. in C.E. District Engineer Construction Dept., Southern Railway System, 208 Tryon St., Charlotte, N. C.  
 Garrard, Guy, B.S. in T.E. Treasurer Hamburger Cotton Mills, Columbus, Ga.  
 Hamilton, G. W., B.S. in T.E. Superintendent Crown Cotton Mills, Dalton, Ga.  
 Hodnett, J. D., B.S. in T.E. Unknown.  
 Howard, A. R., B.S. in T.E. Textile Expert with Cannon Mills, 55 Worth Street, New York City.  
 Huff, C. C., B.S. in M.E. Engineer in Charge U. S. Engineer Field Office, Fort Rosecrans, Cal.  
 Kamper, C. J., Jr., B.S. in C.E. Member firm C. J. Kamper Grocery Co., Atlanta, Ga.

# Georgia School of Technology

Kennedy, A. D., B.S. in E.E. Vice-Pres. and Mgr., American Machine and Mfg. Co., V.-Pres. Greenville Iron Works, Greenville, S. C.  
 Kinnard, J. A., B.S. in M.E. Sales Engineer The Fulton Co., Knoxville, Tenn.  
 Lowndes, R. H., B.S. in M.E. Professor Mechanical Drawing, Georgia School of Technology, Atlanta, Ga.  
 Market, B. F., B.S. in M.E. Assistant Engineer, R. M. Walker, 713 Grant Building, Atlanta, Ga.  
 Patterson, E. C., B.S. in M.E. Secretary and General Manager, Chattanooga Boiler and Tank Co., Chattanooga, Tenn.  
 Peteet, P. M., B.S. in T.E. American Tel. & Tel. Co., Hurt Building, Atlanta, Ga.  
 Rankin, W. S., B.S. in M.E. Member firm Haines, Rankin & Co., Savannah, Ga.  
 Roberts, J. E., B.S. in E.C. Member of firm Roberts, Carter Co., 532 Falls Bldg., Memphis, Tenn., Secretary-Treasurer Roberts Cotton Oil Co., Memphis, Tenn.  
 Seddon, E. A., Jr., B.S. in E.E. With Tri-State Telephone Co., El Paso, Texas.  
 Shackelford, F. W., B.S. in E.E. Assistant District Manager Supply Dept., General Electric Co., Philadelphia, Pa., Witherspoon Bldg.  
 Solomon, L. M., B.S. in T.E. Poultry Breeder, Macon, Ga.  
 Snowden, S. L., B.S. in M.E. Broker, 34 Pine Street, New York City.  
 Swain, F. C., B.S. in T.E. Merchandising, Reeves, Ga.  
 Swanson, J. G., B.S. in T.E. Unknown.  
 Thrash, J. L., B.S. in E.E. and M.E. Engineer J. B. McCrary Co., Third Nat. Bank Bldg., Atlanta, Ga.  
 Van Wormer, R. B., B.S. in M.E. Mch. Eng. American Linseed Co., Woolworth Bldg., New York City.; Box 336 Port Richmond, N. Y.  
 Wagner, C. F., B.S. in M.E. Capt. E. O. R. C., U. S. R. Home address, 72 Drewry Street, Atlanta, Ga.  
 Whitner, J. A., Jr., B.S. in M.E. Special Agent Liverpool, London & Globe Insurance Co., Box 123, Jacksonville, Fla.  
 Wilson, A. C., B.S. in E.E. Asst. Engr. Elec. Dept., Ga. Ry. & Power Co., Atlanta, Ga.  
 Wilson, S. H., B.S. in E.C. Assistant State Chemist, Atlanta, Ga.  
 Wright, Paul, B.S. in M.E. Asst. Chief Eng'r. Tenn Coal, Iron & Railroad Co., 1005 Woodward Bldg., Birmingham, Ala.

## CLASS OF 1904.

Acker, W. H., B.S. in E.E. Sales Engineer, Railway & Industrial Eng. Co., 2 Rector St., New York City.  
 Albury, U. E., B.S. in E.E. Deceased.  
 Blackburn, B. M., B.S. in M.E. Chief Engineer, R. D. Cole Manufacturing Co., Newnan, Ga.  
 Brandon, W. W., B.S. in M.E. Sec. Tr. Robinson Hardware Co., Dublin, Ga.  
 Campbell, W. C., B.S. in E.E. Contracting Engineer, Com. Bank Bldg., Charlotte, N. C.  
 Davenport, F. B., B.S. in E.E. Asst. Eng'r. Elec. Dept., Distribution Div. Ga. Ry. & Pw. Co., Room 456 Elec. & Gas Bldg, Atlanta, Ga.  
 Davis, W. M., B.S. in T.E. Senior Member W. M. Davis Co., Investment Securities, 305 Ga. Casualty Bldg., Macon, Ga.

# Class of 1904

Dobbs, Z. T., B.S. in T.E. Deceased.  
 Edmondson, C. H., B.S. in T.E. Textile Eng'r. with Massachusetts Mills in Georgia, Lindale, Ga.  
 Emery, A. R., B.S. in E.E. Captain, U. S. Army, Washington, D. C.  
 Estes, J. W., B.S. in E.E. Manager and Junior Partner Estes Mfg. Co., Rex Ga.  
 Furlow, S. D., B.S. in T.E. Traveling Salesman Sheffield Co., Americus, Ga.  
 Glenn, G. R., Jr., B.S. in E.C. Inspector Southeastern Underwriters' Association, 533 Tr. Co. of Ga. Bldg., Atlanta, Ga.  
 Hall, J. A., Jr., B.S. in E.C. Export Sales Mgr. A. M. Byers Co., 235 Water St., Pittsburgh, Pa.  
 Harbour, G. A., B.S. in T.E. Merchant, 41 N. Pryor St., Atlanta, Ga.  
 Hilliard, C. M., B.S. in E.C. Chemist, Hodgson Oil Refining Co., Box 32, Athens, Ga.  
 Holtzclaw, R. C., B.S. in E.C. Chemist the F. S. Royster Guano Co., Box 692, Macon, Ga.  
 Hunnicutt, L., B.S. in M.E. and E.E. Assistant Secretary, Southeastern Underwriters' Association, 527 Tr. Co. of Ga. Bldg., Atlanta, Ga.  
 Jones, C. A., B.S. in T.E. In charge of Bleaching and Dyeing Department, Georgia School of Technology, Atlanta, Ga.  
 Jordan, R. K., B.S. in T.E. With Chief Engineer, Southern Bell Tel. Co., Atlanta, Ga.  
 Maddox, F. R., B.S. in E.C. Chemist, Manager Rome Testing Laboratory, Rome, Ga.  
 Mathewson, S. B., B.S. in T.E. Personnel Supervisor in U. S. Army Camps.  
 Matthews, C. W., B.S. in T.E. Gen. Mg'r. T. F. Matthews & Son, Woodland, Ga.  
 McCamy, C. C., B.S. in M.E. Manager of Public Utilities, Dalton, Ga.  
 Monsalvatge, A. R., B.S. in E.E. Statesboro Oil Co., Statesboro, Ga.  
 Moore, Berrien, B.S. in E.E. Sales Engineer, Allis-Chalmers Mfg. Co., 1105 Healey Bldg., Atlanta, Ga.  
 Moore, J. E., B.S. in T.E. Experimental Dept. Barber-Coleman Co., Rockford, Ill.; address, Box 304, Dover, N. H.  
 Neely, F. H., B.S. in M.E. Industrial Engineer, Fulton Bag & Cotton Mills, Atlanta, Ga. Address, 633 Piedmont Avenue.  
 Pringle, D. R., B.S. in E.E. Superintendent City Water and Light Plants, Thomasville, Ga.  
 Redwine, L. S., B.S. in M.E. Draftsman, Garfield Smelting Co., Garfield, Utah; address, 1169 Douglas St., Salt Lake City, Utah.  
 Reid, I. H., B.S. in E.E. Mgr. Reid Drug Co., Athens, Ga.  
 Sanders, M. T., B.S. in T.E. Furniture and Funeral Director, Commerce, Ga.  
 Scales, H. J., B.S. in E.E. and M.E. Deceased.  
 Strauss, H.M., B.S. in T.E. President Roper-Strauss-Ferst Tile Co., Birmingham and Atlanta.  
 Stribling, T. E., B.S. in T.E. President and General Manager Habersham Mills, Habersham, Ga.  
 Strickland, N. H., B.S. in E.E. Captain Ordnance, U. S. A., A. E. F.  
 Strong, C. H., B.S. in M.E. Roadway Engineer, Ga. Ry. & Power Co., Atlanta, Ga.



# Georgia School of Technology

- Sutker, S., B.S. in E.C. Consulting Chemist, 88 Broad St., Boston, Mass.  
 Vaughan, J. H., B.S. in E.E. U. S. Army, Washington, D. C.  
 Whitner, H. F., B.S. in C.E. Special Agent, Jno. C. Whitner & Co., 305 Grant Bldg., Atlanta, Ga.  
 Wright, A. H., B.S. in M.E. Stock Raising and Farming, Calhoun, Ga.

## CLASS OF 1905.

- Basch, E. B., B.S. in T.E. Auditor, Central of Georgia Railway, Savannah, Ga.  
 Brogdon, J. S., B.S. in E.C. Analytical Chemist, 70 1-2 Peachtree St., Atlanta, Ga.  
 Burns, W. C., B.S. in T.E. Treasurer and Manager, Nat'l. Drama Corporation, New York City.  
 Bussey, E. H., B.S. in T.E. National Tel. Sup. & Development Co., Box 1294, Atlanta, Ga.  
 Collier, L. S., B.S. in M.E. Insurance Adjuster, 60 Wall St., New York.  
 Collins, J. D., B.S. in M.E. Sales Engineer, 927 Grant Building, Atlanta, Ga.  
 Daniels, L. C., B.S. in E.C. Research Chemist, National Aniline & Chem. Co., Buffalo, N. Y.  
 Eagan, H. E., B.S. in M.E. Chief Engineer, Harris Granite Quarries Co., Salisbury, N. C.  
 Gregg, R., B.S. in M.E. Secretary and Treasurer Atlantic Steel Co., Box 1714, Atlanta, Ga.  
 Hodgson, W. B., B.S. in M.E. Secretary and Treasurer Hodgson Oil Refining Co., Athens, Ga.  
 Houseal, J. W., B.S. in C.E. Captain 307th Engineers, U. S. R.  
 Howard, J. H., B.S. in M.E. General Superintendent East Coast Navigation Co., Jacksonville, Fla.  
 Kroner, F. A., B.S. in E.E. With Anniston Steel Co., Anniston, Ala.  
 Lambert, Thos. A., B.S. in E.E. Manager Atlanta Stone Co., 15 Jones Ave., Atlanta, Ga.  
 Loyd, J. C., B.S. in M.E. Superintendent Southern Cotton Oil Co., Fort Gaines, Ga.  
 Montgomery, W. F., B.S. in C.E. Asst. Supt. of Mines, Republic Mining and Mfg. Co., Rockrun, Ala.  
 Morton, F. C., B.S. in E.E. Aero Eng's. U. S. Signal Service, 509 Lindsey Bldg., Dayton, Ohio.  
 Morton, T. W., B.S. in E.E. Farmer, R. F. D. No. 1, Athens, Ga.  
 McConnell, J. H., B.S. in E.E. 1st Lieut. Signal Corps, Instructor 1st Corps School A. E. F.  
 McGhee, E. Pierce, B.S. in M.E. Cashier McGhee Cotton Co., Rome, Georgia.  
 Pringle, W. A., Jr., B.S. in C.E. Cashier First National Bank, Thomasville, Ga.  
 Smith, S. K., B.S. in E.E. Superintendent City Lighting and Water Plants, Ashburn, Ga.  
 Spence, R. J., B.S. in E.E. 1st Lieut. 82nd Field Artillery.  
 Stanton, T. D., B.S. in T.E. With Social Circle Cotton Mills, Social Circle, Ga.  
 Stephens, Phinehas V., B.S. in E.E., M.E. Consulting Engineer, 1258 Morris Avenue, New York, N. Y.  
 Tatum, C. S., in T. E. Inspector of Ordnance. Ordnance Dept., U. S. A., 811 Candler Bldg., Atlanta, Ga.

# Classes of 1905, '06

- Thompson, P. W., B.S. in M.E. Chief Draftsman, Central Oolitic Stone Co., Chicago, Ill. Address, 2126 S. Kedzie Avenue.  
 Weeks, J. E., B.S. in M.E. Funeral Director, 112 Liberty Street, W. Savannah, Ga.

## CLASS OF 1906.

- Anderson, R. A., B.S. in M.E. Gen. Sales Mgr., Amer. Steel Co., of Cuba, Empedrado 17, Havana, Cuba.  
 Appleby, W. C., B.S. in M.E. Engr. So. Wheel Co., Birmingham, Ala.  
 Bagwell, W. N., B.S. in T. E. Superintendent Liberty Cotton Mills, Dallas, Ga.  
 Beane, J. S., B.S. in E.E. Continental Commercial Credit & Trust Co., 1 Wall St., New York.  
 Beck, L. H., B.S. in T.E. Superintendent Georgia Cotton Mills, Griffin, Ga.  
 Bromhead, E. B., B.S. in C.E. Sales Engineer, 31 Warren St., New York City.  
 Collier, J. Z., B.S. in M.E. Chief Engineer Whataker-Glessner Co., Portsmouth, Ohio.  
 Connally, P. H., B.S. in E.E. Supt. Elect. Construction, Tenn. Power Co., Cleveland, Tenn.  
 Davis, G., B.S. in M.E. Farmer, Donalds, S. C.  
 Day, C. C., B.S. in M.E. Care The Thos. McCaul Co., Philadelphia, Pa.  
 Donaldson, Clarke, B.S. in E.C. Engineer in Charge Sewers, Office of Chief of Construction, Atlanta, Ga.  
 Dumas, W. C., B.S. in E.C. State Chemist, Atlanta, Ga.  
 Fagan, F. J., B.S. in C.E. 503 Citizens Bank Bldg., Tampa, Fla.  
 Fowler, E., B.S. in M.E. 1st Lt. Ord., U. S. A.  
 Glenn, M. T., B.S. in M.E. Inspector, Continuous Service Shop, Hartford Steam Boiler Insp. & Ins. Co., at the Casey-Hedges Co., Chattanooga, Tenn.  
 Greene, H. G., B.S. in M.E. Eng'ng and Purchasing Dept., Fulton Bag and Cotton Mills, Atlanta, Ga.  
 Holt, V. P., B.S. in E.E. With American T. & T. Co., 1401 Hurt Bldg., Atlanta, Ga.  
 Hoyt, C. A., B.S. in E.E. Manager Atlanta National Bank Bldg., Jacksonville, Fla.  
 Hunt, R. A., B.S. in M.E. Deceased.  
 Ingle, J. P., B.S. in C.E. Manager Keokuk Electric Co., 802 Main St., Keokuk, Ia.  
 Lowe, Grover O., B.S. in M.E. President Central Lumber Co., Atlanta, Ga.  
 Lozier, I. N., B.S. in E.E. Lozier-Gandy Co., Electrical and Civil Engineers, LaGrange, Ga.  
 Maclean, Malcolm R., B.S. in M.E. Major Inft., R. C. 154th Depot Brigade.  
 Marshall, D. S., B.S. in E.E. Electrical Engineer, Charlotte Harbor & Northern Ry., Arcadia, Fla.  
 Mays, S. Warren, B.S. in M.E. Assistant to Gen. Manager American Cyanamid Co., 511 Fifth Avenue, New York City.  
 Meckel, A. W., B.S. in E.E. District Wire Chief Sou. California Telephone Co., Los Angeles, Cal., 1932 S. Grand Avenue.

McCord, C. M., B.S. in E.E. Manager St. Louis Service Station Wagner Electric Mfg. Co., 2017 Locust St., St. Louis, Mo.  
 Noyes, E. P., B.S. in E.E. Captain, C. A. C.  
 Orr, S. M., Jr., B.S. in E.E. Anderson, S. C.  
 Platt, J. C., B.S. in T.E. Supt. Necronsett Mill, Cumberland, N. C.  
 Roberts, E. E. G., B.S. in E.E. 1st Lt. Signal Corps, U. S. R., A. E. F.  
 Roberts, S. N. B.S. in E.E. Assistant General Superintendent Atlantic Steel Co., Atlanta, Ga.  
 Rowan, F. M., B.S. in T.E. Principal First District Agricultural and Mechanical School, Statesboro, Ga.  
 Sims, H. H., B.S. in C.E. Managing Director Young Commission Co., Fall Building, Memphis, Tenn.  
 Smith, Chas. H., B.S. in E.C. Clerk City Court of Macon, Ga.  
 Tigner, C. H., B.S. in M.E. Engineering Dept., Lummus Cotton Gin Co., Columbus, Ga.  
 Walden, F. J., B.S. in M.E. Engineer, Erie, Pa.  
 Warfield, Wayne, B.S. in E.E. Supt. Lighting, Savannah Elec. Co., Savannah, Ga.  
 Wells, Arnold, B.S. in E.E. Engineer of Costs, Edward Const. Co., Tampa, Fla.  
 Wolfe, T. L., B.S. in C.E. Captain Engineers U. S. R., U. S. Army.

## CLASS OF 1907.

Angas, R. M., B.S. in M.E. 1st Lieut., 106th Engineers, U. S. Army, N. G.  
 Apple, J. J., B.S. in E.E. Member firm Apple & Riley, 24 E. Bryan Street, Savannah, Ga.  
 Brown, B. S., B.S. in E.C. Mgr., Ga. Rosin Products Co., Brunswick, Ga.  
 Corley, C., B.S. in T.E. Manager Necronsett Mills, Inc., Cumberland, N. C.  
 Corse, H. M., B.S. in E.E. Ensign U. S. Navy.  
 Cowan, W. H., B.S. in E.E. Deceased.  
 Davies, F. C., B.S. in M.E. With Youngstown Sheet & Tube Co., Youngstown, Ohio.  
 Dupre, W. E., B.S. in E.E. Member firm Dupre Mfg. Co., Atlanta, Ga.  
 Emerson, L. A., B.S. in C.E. Asst. Engr. Tomlinson Eng'r. Co., Loan and Exchange Bldg., Columbia, S. C.  
 Haines, Garrard, B.S. in M.E. Capt. Coast Art., N. G., 61st Art.  
 Hodgson, G. O., B.S. in E.E. District Sales Manager Edison Lamp Works, of Gen. Elec. Co., Denver, Colo.  
 Holtzclaw, J. G., B.S. in E.E. General Superintendent Pensacola Electric Co., Pensacola, Fla.  
 Jackson, L. R., B.S. in M.E. Sales Department, Walsh & Weidener Boiler Co., Chattanooga, Tenn.  
 Johnson, W. H., B.S. in M.E. Farming, R. F. D. 1, Upatoi, Ga.  
 Kenner, E. R., B.S. in M.E. Sales Eng'r Power Div., Westinghouse Electric and Mfg. Co., 1701 Union Bank Bldg., Pittsburg, Pa.  
 Knight, A. C., B.S. in C.E. Contracting Engineer, Albany, Ga.  
 Leech, H. H., B.S. in M.E. Asst. Supt. Pratt Eng. & Mch. Co., Hurt Building, Atlanta, Ga.

Longino, B. T., B.S. in E.E. Supt. Jacksonville Traction Co., Jacksonville, Fla.  
 Longino, Olin H., B.S. in E.E. Capt., C. A. C., Fort Moultrie, S. C.  
 Mann, L. B., B.S. in C.E. 1st Lieut. Ordnance, R. C., Rock Island Arsenal, Ill.  
 Marchmont, G. T., B.S. in E.E. Sales Manager Western Electric Co., Richmond, Va.  
 Murray, E. F., B.S. in M.E. Mech. Engineer, Lummus Cotton Gin Sales Co., Dallas, Texas, Box 1358.  
 McLarty, J. W., B.S. in E.E. Captain, U. S. R.  
 Pierce Emory L., B.S. in E.E. Pierce Bro. Co., Key West, Fla.  
 Pittard, C. W., B.S. in E.E. Reserve Officers Tr. Camp, Camp Lee, Petersburg, Va.  
 Raht, T. E., B.S. in T.E. Supt. Hamburger Mills, Columbus, Ga.  
 Riley, R. A., B.S. in E.E. Salesman, Western Electric Co., Atlanta, Ga.  
 Sims, J. E., B.S. in E.E. Sales Agent, General Electric Co., New Orleans, La.  
 Sparks, A. H., B.S. in E.E. Superintendent Jasper Water, Light & Power Co., Jasper, Ala.  
 Stout, G. M., B.S. in E.E. District Manager, National Metal Molding Co., of Pittsburg, Pa., 1517 Healey Bldg., Atlanta, Ga.  
 Trapnell, J. M., B.S. in M.E. With the Walsh & Weidener Boiler Co., Chattanooga, Tenn.  
 Willat, A. F., B.S. in E.E. Engineer Larkin Mfg. Co., San Francisco, Cal., 231 1st St.  
 Wood, W. E., B.S. in E.E. Superintendent of Railway, El Paso Elec. Co., El Paso, Texas.

## CLASS OF 1908.

Adair, M. C., B.S. in E.E. Inspector Am. Tel. & Tel. Co., Atlanta, Ga.  
 Adamson, C., Jr., B.S. in E.E. Passenger Agent, United Fruit Co., Cristobal, Canal Zone.  
 Baldwin, J. R., B.S. in E.E. Special Elec. Eng'r. Ga. Ry. & Power Co., Atlanta, Ga.  
 Cheney, G. W. H., B.S. in M.E. Student University of Virginia, Charlottesville Va.  
 Crumbley, J. J., B.S. in E.E. 1st Lieut., Med. Reserve Corps, 313th Labor Battalion, A. E. F.  
 Davenport, J. E., B.S. in M.E. and E.E. Train Master Harlem Div. New York Central R. R., 59 Kinderhook St., Chatham, N. Y.  
 Emerson, C. L., B.S. in M.E. and E.E. Commercial Engineer, Southern Power Co., Charlotte N. C.  
 Evans, H. B., B.S. in E.E. General Manager Eastern Printing Co., 150 Lafayette St., New York City.  
 Fosterling, C. W., B.S. in M.E. Steam Turbine Engineer, General Electric Co., Schenectady, N. Y. Mailing address: Box 421, Schenectady, N. Y.  
 Gibbs, G. W. Jr., B.S. in M.E. The Gibbs Gas Engine Co., Jacksonville, Fla.  
 Goodier, L. E., Jr., B.S. in E.C. Lt. Col., U. S. A. Aviation Section, Washington, D. C.



# Georgia School of Technology

Hardin, F. H., B.S. in M.E. Master Mechanic New York Central R. Co., Utica, N. Y.  
Hargrove, S. J., B.S. in C.E. Contractor, Eastman, Ga.  
Henderson, C. H., B.S. in E.E. Div. Supt., Alabama Power Co., Anniston, Ala.  
Hendrie G. A., B.S. in M.E. Engineer, Air Nitrates Corp., 511 5th Avenue, New York.  
Johnson, T. F., Jr., B.S. in M.E. and E.E. Superintendent Transmission Distribution, Georgia Railway & Power Co., Atlanta, Ga.  
Kollock, E. C., B.S. in M.E. Supt. Gas Dept. Charleston Consolidated Ry. & Lighting Co. Charleston, S. C.  
MacIntyre, D. I., Jr., B.S. in M.E. Haas & MacIntyre, Atlanta, Ga., 503 Empire Building.  
McCarty, G. W., Jr., B.S. in M.E. Assistant Secretary, Ashcraft-Wilkison Co., 1302-9 Candler Building, Atlanta, Ga.  
McClure, H., B.S. in C.E. 1st Lieut., U. S. R., 34 Highland Avenue, Piedmont, Cal.  
Pope, H. D., B.S. in C.E. Captain, E. R. C., 106th Engineers. Home address, Newnan, Ga.  
Pritchard, W. O., B.S. in M.E. Deceased.  
Rice, P. B., B.S. in E.E. Dublin, Ga.  
Robert, L. W., Jr., B.S. in C.E. Sr. Member Robert & Co., Mill Architects and Engineers, Candler Bldg., Atlanta Ga.  
Slaughter, N. H., B.S. in E.E. Lieut. Col., Radio Division S. C., Washington, D. C.  
Snyder, W. R., B.S. in M.E. 1st Lieut. Ordnance Dept., U. S. R. C.  
Spivey, W. T., B.S. in C.E. Mgr. Interstate Engineering Co., Oklahoma City.  
Summer, E. S., B.S. in T.E. Gen'l. Superintendent Mollohon Mfg. Co., Newberry, S. C.  
Sweet, C. A., Jr., B.S. in T.E. Superintendent Swift Mfg. Co., Columbus, Ga.  
Treanor, E. D., Jr., B.S. in E.E. Designing Engineer General Electric Co., Pittsfield, Mass.  
Vaughn, H. R., B.S. in E.C. Captain, Coast Artillery Corps, Acting Quartermaster, Del Rio, Texas.  
Werner, R. C., B.S. in E.C. Chemist, Georgia State Board of Health, Atlanta, Ga.  
Wilby, R. B., B.S. in E.E. President Strand Amusement Co., Montgomery, Ala.  
Woodall, J. H., B.S. in M.E. Proprietor Woodland Excelsior Works, Woodland, Ga.  
Woolfolk, A. R., Jr., B.S. in E.E. Patent Attorney, Hudson Terminal Bldg., 50 Church St., New York.  
Young, H. A., B.S. in E.E. Superintendent Waterworks, Eatonton, Georgia.

## CLASS OF 1909.

Adamson, N. E., B.S. in M.E. Assistant Superintendent of Shops, U. S. Navy Norfolk, Va.  
Adamson, W. L., B.S. in M.E. With Martin J. Lide, Consulting Eng'r. Woodward Building, Birmingham, Ala.  
Barkdull, J. W., Jr., B.S. in M.E. With H. & B. Beer, Cotton Brokers, 325 Baronne Street, New Orleans, La.

# Classes of 1909, '10

Barnwell, G. W., B.S. in E.E. 1st Lieutenant, C. A. C., U. S. A.  
Bostwick, C. E., Jr., B.S. in E.E. With Pensacola Elect. Co., Pensacola, Fla.  
Chapman, J. G., B.S. in T.E. Superintendent Chinnabee Valley Mills, Talladega, Ala.  
Clark, W. C., B.S. in T.E. Capt. C. A. C., U. S. R.  
Cook, J. R., B.S. in E.E. Care J. B. McCrary Co., Atlanta, Ga.  
Cundell, A. B., B.S. in E.E. First Lieutenant, Ord. Reserve Corps. 6th and B. Sts., N. W., Washington, D. C.  
Cureton, J. G., B.S. in E.E. 2nd Lieut., S. R. C.  
Dumas, H. N., B.S. in E.C. Deceased.  
Fernandez, R., B.S. in C.E. First Assistant to Chief Engineer, Havana Paving Works, Havana, Cuba.  
Gardner, F. H., B.S. in M.E. Chief Engineer, Pratt Engineering & Machine Co., Atlanta, Ga.  
Gary, F. P., B.S. in M. E. Cadet in Aviation Flying Division. Home address, 718 Green Street, Augusta, Ga.  
Gable, F. R., B.S. in C.E. With Lockwood Green & Co., Healey Bldg., Atlanta, Ga.  
Harrison, O. L., B.S. in M.E. With Wilcox, Peck & Hughes, Exchange Building, Dallas, Texas.  
Hightower, W. H., B.S. in T.E. Treasurer Thomaston Cotton Mills, Thomaston, Ga.  
Horsley, E. S., B.S. in C. E. Public Surveyor and Civil Engineer, Dawson, Ga.  
Myers, P. H., B.S. in C.E. First Asst. Engr. and R. R. Supt., Cuyamel Fruit Co., Cuyamel, Honduras, Cen. Am. Address, New Orleans, La.  
Myers, Z. V., B.S. in C.E. Supt. Durham Coal & Iron Co., Soddy, Tenn.  
Rogers, E. H., B.S. in T.E. Supt. Fulton Bag & Cotton Mills. Address, 17 Grady Place, Atlanta, Ga.  
Simmons Gordon, B.S. in E.E. Electrical and Mining Engineer, Carolina Spar and Mica Co., 239 Peachtree St., Atlanta, Ga.  
Simons, W. Lucas, B. S. in E.C. 2nd Lieut., Aviation Section, Signal Corps.  
Smith, E. W., B.S. in E.E. Motor and Control Specialist General Electric Co., 1313 Pierce Bldg., St. Louis, Mo.  
Trippe, R. E., B.S. in C.E. Chief Draftsman Atlanta and Anderson Const. Co., Elect. & Gas Bldg., Atlanta, Ga.  
Williams, W. L., Jr., B.S. in M.E. Head of Oven Dept., H. Koppers Co., Pittsburg, Pa. Address, 1139 Miss. Ave., Dormont, Pa.  
Wright, J., B.S. in M.E. In active service with Reg. of Engineers

## CLASS OF 1910.

Arrington, L., B.S. in E.E. Machinist Arrington Foundry and Machine Co., Brookhaven, Miss.  
Berry, C. O., B.S. in C.E. Supt. General Bauxite Corp., Toombsboro, Georgia.  
Clarke, C. R., B.S. in E.C. Assistant State Chemist. Atlanta, Ga.  
Crawford, A. G. R., B.S. in E.E. S. C., U. S. R., A. E. F. Home address, Corpus Christi, Tex.  
Cronheim, B. H., B.S. in E.E., Sales Manager, Alabama Power Co., Birmingham, Ala.

## Georgia School of Technology

Davis, A. H., Jr., B.S. in E.E. Ensign, U. S. N.  
 Duncan, G. W., B.S. in T.E. Captain, F. A. R. C., A. E. F.  
 Fellers, W. M., B.S. in M.E. Lieut., U. S. N. R. F., Naval Air Station, Norfolk, Va.  
 Ferst, H. W., B.S. in T.E. 1st Lieut., C. A. R. C., Bat. L, 52nd Art., A. E. F.  
 Freeman, Y. F., Jr., B.S. in E.E. Gen. Mgr. and Vice-Pres. S. A. Lynch Ent., Inc. 1457 Broadway, N. Y.  
 Halliday, M. W., Jr., B.S. in E.E. Testing Engineer, The Babcock & Wilcox Co., Bayonne, N. J.  
 Hausman, F. W., B.S. in E.E. Efficiency Eng'r., Tallassee Power Co., Baden, N. C.  
 Hesterly, H. W., B.S. in C.E. First Lieut., 6th Eng'r. Reserve Corps, A. E. F.  
 Howard, M. W., Jr., B.S. in T.E. With Lockwood, Greene & Co., Atlanta, Ga.  
 Ivy, J. W., B.S. in C.E. Western Sales Manager American Cast Iron Pipe Co., 715-16-17 Scarritt Bldg., Kansas City, Mo.  
 Jones, C. E., B.S. in E.E. Manager Live Oak Lumber Co., Live Oak, Fla., Agent The Texas Company.  
 Lang, O. H., B.S. in C.E. Civil Engineer, Moultrie, Ga.  
 Legg, M. F., B.S. in M.E. Foreman in charge of Standardization, Curtiss Aeroplane Co. Address, 385 Elmwood Ave., Buffalo, N. Y.  
 Lewis, T. L., Jr., B.S. in T.E. Private, Camp Gordon. Address, 293 E. 4th St.  
 Marshall, W. B., B.S. in C.E. Supervisor of Track, Southern R. R. Address, Greensboro, N. C.  
 Pappa, J. H., B.S. in T. E. Representing Hamburger Cotton Mills, Room 1139, 346 Broadway, N. Y.  
 Pappenheimer, Jack, B.S. in M.E. 2nd Lieut., Ord. Res. Corps, Production Division, Washington, D. C.  
 Reid, C. W., B.S. in M.E. President R. E. Lee Institute, Thomas-ton, Ga.  
 Rountree, A. C., B.S. in C.E. 2nd Lieut., C. A. C. Home address, Quitman, Ga.  
 Semmes, G. W., B.S. in M.E. Captain, Eng'r. Corps, A. E. F.  
 Simmons, S. C., B.S. in T.E. Supt. and Mgr., Eureka Cotton Mills, Chester, S. C.  
 Sims, R., B.S. in E.E. 1st Lieut., C. A. R. C., 64th Artillery.  
 Summerour, B. F., B.S. in M.E. Farming, Duluth, Ga.  
 Thiesen, R. J., B.S. in E.E. Teacher Tech High School, Atlanta, Ga.  
 Tutwiler, W. S., B.S. in E.E. Vice-President Savannah Eng. & Construction Co., Savannah, Ga.  
 Ware, N. B., B.S. in M.E. Mgr. and Treas., Attalla Oil and Fertilizer Co., Attalla, Ala.  
 Warner, H. A., B.S. in E.E. Investigator, Georgia Ry. & Power Co., Atlanta, Ga. Address: 330 Elect. and Gas Bldg.  
 Wood, H. J., B.S. in E.E. Real Estate, Jacksonville, Fla.

### CLASS OF 1911.

Adkins, F. S., B.S. in E.E. Salesman Westinghouse Electric & Mfg. Co. Address, 11 King Edward Apts., Pittsburg, Pa.  
 Anderson, C. E., B.S. in E.E. Gatun Locks, Gatun, Canal Zone.

### Class of 1911

Auld, I. M., B.S. in Arch. Member of Firm Roberts & Co., 913 Candler Building, Atlanta, Ga.  
 Barney, W. Pope, B.S. in Arch. Instructor in Design, Carnegie Technical Schools; associated with Rutan & Russell, Architects, Pittsburg, Pa.  
 Beckwith, H. B., B.S. in E.E. Science & Research Div., Aviation Section, Signal Corps.  
 Benson, L. C., B.S. in E.E. Telephone Engineer, Southern Bell Tel. & Tel. Co., 57 1-2 S. Pryor St., Atlanta, Ga.  
 Bleakley, E. A., B.S. in E.E. 2nd Lieutenant Supply Co., 30th U. S. Inf., A. E. F.  
 Burt, A. M., B.S. in T.E. Efficiency Man, Richmond Hosiery Mills, Rossville, Ga.  
 Burruss, J. P., B.S. in E.E. Supt. Cherokee Fertz. Co., Macon, Ga.  
 Burroughs, R. A., B.S. in Arch. 1st Lieut., U. S. R., Camp Gordon, Ga.  
 Chandler, E. F., B.S. in T.E. Ensign U. S. Naval Reserve.  
 Clarke, J. T., B.S. in Arch. Supt. of Construction under Treas. Dept., P. O. Bldg., Forsyth, Ga.  
 Coleman, P. M., B.S. in C.E. 1st Lieut., 164th Field Artillery, N. A.  
 Collier, D. C., B.S. in T.E. Sec.-Treas. and Gen. Manager Collier Mfg. Co., Barnesville, Ga.  
 Cowles, C. A., Jr., B.S. in M. E. Science and Research Div., Aviation Sec., Sig. Corps.  
 Crane, J. E., B.S. in Arch. With Ga. Ry. & Power Co., Tallulah Falls, Georgia.  
 Dawkins, D. C., B.S. in E.E. Sec. and Treas., C. T. Dawkins Construction Co., 305 Fla. Life Bldg., Jacksonville, Fla.  
 Dawson, V. S., B.S. in M.E. Gen. Supt. Fidelity Cotton Oil Co., Houston, Texas. Box 1793.  
 Donaldson, M. L., B.S. in E.E. Commercial Engineer, Westinghouse Elec. & Mfg. Co. Address, 300 N. Broadway, St. Louis, Mo.  
 Faillaize, E., B.S. in T.E. Secretary, J. B. Fallaize Co., 14 S. Broad St., Atlanta, Ga.  
 Ferst, M. A., B.S. in M.E. Sec. and Treas., Roper-Strauss-Ferst Tile Co., Inc., Birmingham, Ala.; Atlanta, Ga. Address, 170 Peach-tree Street.  
 Fleming, W. P., Jr., B.S. in M.E. Asst. Engineer, J. S. Schofield's Sons Co., Macon, Ga.  
 Gantt, J. A., B.S. in E.E. Traffic Eng'r., Sou. Bell Tel. & Tel. Co., Charlotte, N. C.  
 Glover, C. V. C., B.S. in E.E. First Lieut., C. A. R. C.  
 Golden, R. F., B.S. in M.E. Supt. Riverside Works The Nat'l. Lock Washer Co., Riverside, N. J.  
 Goodloe, W. Hopson, B.S. in C.E. Contracting Engineer, 204 Citizens & Com. Bank Bldg., Macon, Ga.  
 Goodman, B. E., B.S. in E.E. Fundamental Plan Engineer, Sou. Bell Telephone Co., Atlanta, Ga.  
 Green, L. F., B.S. in E.E. Engr. Dept. Southern Bell Tel. & Tel. Co., Atlanta, Ga.  
 Hazelhurst, J. G., B.S. in C.E. Second Lieutenant Inf., R. C., U. S. A. Supt. Div. Water and Sewers.  
 Heinz, W. L., B.S. in M.E. First Lieutenant 17th Eng'r. (Ry.), A. E. F.  
 Herault, P. C., B.S. in E.E. Supt. High Tension Lines and Stations, Ga. Railway & Power Co., 452 Elect. & Gas Bldg., Atlanta, Ga.



# Georgia School of Technology

Hill, E. D., B.S. in E.E. 1st Lieut., Signal Reserve Corps.  
Hill, M. S., B.S. in E.E. Capt. Signal Reserve Corps, 402nd Telegraph Battalion.  
Holt, F. W., Jr., B.S. in C.E. Head of Dept. of Shops, Atlanta Tech High School, Atlanta, Ga.  
Howe, W. F., B.S. in C.E. First Lieut., U. S. Engineers.  
Kellogg, W. D., B.S. in E.E. Sales Engineer, Consolidated Gas Electric Light & Power Co., Baltimore, Md.  
Kollock, G. J., B.S. in E.E. Second Lieut., Co. 5, Engineers, R. C., Camp Lee, Va.  
Kroner, H. A., B.S. in C.E. Captain Co. A, 15th Infantry, Tientsin, China.  
Levy, M. H., B.S. in Arch. Levy & Clarke, Architects, Germania Bldg., Savannah, Ga.  
Loving, H. W., B.S. in M.E. Captain, C. A. C., U. S. R., A. E. F.  
Lyon, E. H., B.S. in E.E. American Tel. & Tel. Co., West Palm Beach, Fla. Box 115.  
Markley, W. A., B.S. in Arch. First Lieut., Ord., R. C.  
McRae, K. C., B.S. in C.E. Reinforcement, 1150 Penobscott Bldg., Detroit, Mich.  
Neel, R. W., B.S. in M.E. Chief Engineer, Erie Pump & Engine Works, Medina, N. Y.  
Novoa, G., B.S. in E.E. Gen. Mgr. Oriente Coca-Cola Bottling Co., Santiago, Cuba.  
Oliver, S. M., B.S. in M.E. Farming, Elberton, Ga.  
Robinson, Wm. M., Jr., B.S. in C.E. 2nd Lieut., Engineer Reserve Corps, U. S. A.  
Rodriguez, C. I., B.S. in M.E. Asst. Chief Engineer, Moron Sugar Co., Pina Comaguay, Cuba.  
Smith, H. R., B.S. in T.E. Flying Cadet, Aviation Section.  
Spalding, J. J., Jr., B.S. in M.E. Secretary, Glover Machine Works, Mariette, Ga.  
Stakely, H. C., B.S. in E.E. Asst. Eng'r. Civil Service Bureau of Standards.  
Starke, J. T., B.S. in T.E. Purchasing Agent, Southern Cotton Oil Co., Box 1745, Atlanta, Ga.  
Tippins, L. H., B.S. in E.E. Duquesne Light & Power Co., Pittsburg Pa.  
Walton, E., B.S. in M.E. Ensign U. S. Navy Reserve Force.  
Walton, J., B.S. in E.E. Superintendent Belton Power Co., Belton, S. C.  
Weaver, H. G., B.S. in M.E. Asst. Gen. Mgr. Sun Motor Car Co., Inc., Elkhart, Ind.  
Woodward, D. H., B.S. in E.E. 2nd Lieut., S. R. C.  
Wright, W. C., B.S. in T. E. Capt. Ordnance Reserve Corps; Inspector of Ordnance, U. S. A.

## CLASS OF 1912.

Aichel, W. A., B.S. in C.E. Capt., F. A. R. C., 142 Field Artillery, U. S. A.  
Alexander, W. A., B.S. in C.E. 2nd Lieut., 409th Field Artillery, Camp Gordon.  
Barge, O. A., B.S. in M.E. Chief Eng'r., A. J. Krebs Co., 609 Forsyth Bldg., Atlanta, Ga.  
Barnett, M. H., B.S. in T.E. Capt., C. A. R. C., U. S. A.  
Bethel, T. B., B.S. in M.E. Fourth Officers' Training Camp.

# Class of 1912

Bidez, R. L., B.S. in T.E. Mech. Eng'r. with Lummus Cotton Gin Co., Columbus, Ga.  
Black, D. C., Jr., B.S. in M.E. Sales Mgr. Hudson Motor Car Co., Atlanta, Ga.  
Bleckley, L. E., Jr., B.S. in M.E. Science and Research Div.; Aviation Sec., Signal Corps.  
Branan, C. B., B.S. in C.E. Mess Sgt., Motor Truck Co. No. 339 U. S. A.  
Brooks, E. A., B.S. in M.E. Sales Engineer, The Babcock & Wilcox Co., 1132 Candler Bldg., Atlanta, Ga.  
Bussey, L. J., B.S. in C.E. Asst. Supt. Aberthow Construction Co., Vulcan St., Buffalo, N. Y.  
Byrd, C. A., B.S. in E.E. 2nd Lt., Signal Corps, U. S. A., A. E. F.  
Carson, C. C., B.S. in M.E. Chief Quartermaster Naval Detch., Boston, Mass.  
Coleman, W. B., B.S. in M.E. 1st Lieut. Foreign Detachment, No. 15, Aviation Section Signal Corps., A. E. F.  
Collins, C. I., B.S. in M.E. 1st Lieut. Av. Sec., S. R. C., A. E. F.  
Conacher, R. D., B.S. in E.E. Deceased.  
Drummond, E. D., B.S. in E.E. Electrician Sgt., 1st Class Non-Commissioned Staff, C. A. N. G.  
Emerson, W. A., B.S. in M.E. and E.E. Prov. 1st Lieut., C. A. C., A. E. F.  
Finlayson, D. A., B.S. in Arch. General Merchant and Farmer, Ashville, Fla.  
Goette, F. H., B.S. in C.E. With Hardaway Contracting Co., Americus, Ga.  
Goree, C. P., B.S. in M.E. Chief Eng'r'g Estimator, Frick Co. of Waynesboro, Pa.  
Hall, B. M., Jr., B.S. in M.E. 1st Lieut. 26 Engineers, U. S. A.  
Harris, D. W., B.S. in E.E. With H. L. Doherty & Co., 60 Wall St., New York.  
Harris, R. M., B.S. in E.E. and M.E. Sec. and Treas. Hampton Cotton Mills, Hampton, Ga.  
Hazzard, W. S., B.S. in M.E. Purchasing Agt. and Gen. Asst., Procurement Div., Ord. Dept., U. S. A., Washington, D. C.  
Heard, J. F., B.S. in E.E. Auto Dealer. Macon, Ga.  
Hill, A. W., B.S. in E.E. Captain, C. A. R. C.  
Hope, G. M., Jr., B.S. in M.E. and E.E. With G. M. Hope & Co., 215 Grant Bldg., Atlanta, Ga.  
Hubert, E. H., B.S. in E.E. 2nd Lieut., E. R. C.  
Jones, G. S., Jr., B.S. in E.E. Motor Sales Dept., The C. S. Mersick & Co., New Haven, Conn.  
Kimbell, C. L., B.S. in E.E. Engineer Inspector, Philadelphia Elec. Co., 1000 Chestnut St., Philadelphia, Pa.  
King, C. T., Jr., B.S. in C.E. First Lieut., 503rd Bat. Service Engineers, A. E. F.  
Kunze, A. E., B.S. in E.C. Engineer of Tests, Tennessee Coal, Iron & Ry. Co., Ensley, Ala. Box 445, Birmingham, Ala.  
Lamar, W. H., B.S. in E.E. Sales Manager, The Domestic Electric Co., Cleveland, Ohio.  
Lemon, A. L., B.S. in E.E. Engineer Industrial Control, Engineering Dept., General Electric Co., Schenectady, N. Y.

Linton, W. A., B.S. in E.E. Teacher and Missionary, Presbyterian Mission, Kunsan, Korea.  
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## CLASS OF 1913

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 Crumley, C. L., B.S. in T.E. 1st Lieut., F. A. R. C.  
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# Class of 1914

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## CLASS OF 1914

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 Howe, M. C., B.S. in E.E. Private, Co D, 6th Engineers, U. S. A.  
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## Classes of 1914-'15

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 Wilson, J. E., B.S. in M.E. Science and Research Div., Av. Sec., S. C.  
 Woodruff, B. H., Jr., B.S. in E.E. 1st Lieut., Co. E, 106th Engineers, U. S. N. G.  
 Wright, D. B., B.S. in M.E. 2nd Lieut., E. R. C., A. E. F.  
 CLASS OF 1915.  
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 Benton O. M., B.S. in E.E. Address not known.  
 Boland, C. S., B.S. in E.E. General Electric Co., New York.  
 Burney, C. F., B.S. in T.E. Supt. of Textiles, Q. M. C. of U. S. Army.  
 Butterfield, C. M., B.S. in C.E. Civil Engr., with I. C. R. R., Carbon-dale, Ill.  
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# Classes of 1915, '16

Sneed, P. F. B.S. in E.E. 1st Lt., 316 Field Art., U. S. Army.  
 Sparks, G. H., B.S. in C.E. Naval Reserve Flying Corps, A. E. F.  
 Strickland, J. J. B.S. in E.E. 2nd Lt., Av. Corps, A. E. F.  
 Stubbs, H. D., B.S. in Arch. Arch. Draftsman Bureau Yards and Docks, Navy Dept., Washington, D. C.  
 Stumberg, W. R. B.S. in T.E. 1st Lt. Art. Bat., U. S. A.  
 Sutton, J. P., B.S. in M.E. 2nd Lt., C. A. R. C., Ft. Caswell, N. C.  
 Terrell, L. S., B.S. in E.E. Div. Insp. Western Union Tel. Co., Atlanta, Ga.  
 Troy, W. A., B.S. in C.E. Asst. Supt. Turner Const. Co., 244 Madison Ave., New York.  
 Tucker, W. R., B.S. in Chem. Head of Science Dept., Ga. Military Academy, College Park, Ga.  
 Turner, J. W., B.S. in E.E. 2nd Lt., Av. Section, Signal Corps, A. E. F.  
 Twitty, J. J., B.S. in M.E. Student U. S. Mil. Acad., West Point, N. Y.  
 Vaughan, V. G., B.S. in E.E. 2nd Lt., Co. D., 111th Eng., U. S. A.  
 Watters, L. G., B.S. in C.E. 2nd Lt., Co. C, 508th Engineers, U. S. Army, A. E. F.  
 Westbrook, J. R., B.S. in M.E. Exp. Eng., Aircraft Motor Div., Union Switch and Signal Co., Swissvale, Pa.  
 Witherington, I. F., B.S. in C.E. 1st Lt., 307th Eng., U. S. Army.  
 Wood, C. M., B.S. in C.E. 2nd Lt., F. A. R. C.

# CLASS OF 1916.

Aichel, S. L., B.S. in C.E. 2nd Lt., E. R. C., 514th Engs., U. S. Reserves.  
 Aiken, M. K., B.S. in E.E. Ensign U. S. N., care U. S. S. Penn.  
 Arnold, J., B.S. in C.E. Care Am. T. & T. Co., Hurt Bldg. Accepted for Aviation Section.  
 Battle, R. Jr., B.S. in M.E. and E.E. 2nd Lt., C. A. R. C., A. E. F.  
 Beard, P. E., B.S. in M.E. 2nd Lt, F. A. R. C., A. E. F. (Air Service).  
 Blake, G. J., B.C.S. Acting Mgr., So. Belting Co., New Orleans.  
 Blomeyer, H. P., B.S. in E.C. With National Aniline & Chem. Co., Buffalo, N. Y. Address, 351 Abbot Rd.  
 Boone, L. L., B.S. in Chem. Prof. Science Fulton County High School, Atlanta, Ga.  
 Bowden, H., B.S. in M.E. 200 N. 8th St., Easton, Pa.  
 Brantley, E. P., B.S. in E.E. Savannah Electric Co., Transportation Dept., Savannah, Ga.  
 Brenner, C. P., B.S. in E.C. Chemist, Buckeye Cot. Oil Co., 134 Barnett St., Atlanta, Ga.  
 Brown, C. R., B.S. in E.E. Deceased.  
 Bryan, P. D., B.S. in E.E. U. S. Naval Radio Section, Harvard Univ., Cambridge, Mass.  
 Burge, F. D., B.S. in Arch. Designer with Arthur Tufts, Eng'r, Candler Annex, Atlanta, Ga.  
 Calnan, J. J., B.S. in M.E. Accepted for Aviation Service.  
 Chalmers, C., B.C.S. So. Eastern Passenger Asso., Atlanta, Ga.  
 Clower, P. L., B.C.S. 2nd Lt., U. S. R.  
 Dunn, S. F., B.C.S. Captain, F. A., U. S. A.  
 Fielder, K. J., B.S. in T.E. 2nd Lt., 56th Inf., U. S. A., Machine Gun Battalion.

# Georgia School of Technology

Fink, A. B., B.S. in E.E. 1st Lt., U. S. N. A., 321 M. G. Bat.  
 Flanagan, H. C., B.S. in M.E. 1st Machinist's Mate, U. S. S. Gorgona.  
 Fleet, R. S., B.S. in M.E. 1st Lt., C. A. C., U. S. A.  
 Ford, H. C., B.S. in M.E. 1st Lt., O. R. C.  
 Gardner, C. S., B.S. in M.E. 2nd Lt. O. R. C.  
 Gartrell, R. D., B.S. in Chem. Chemist, Research, Canadian Consolidated Rubber Co., Ltd., Montreal, Can. Address, Westmount Y. M. C. A., Montreal, Can.  
 Goldman, E. L., B.S. in Chem. Chemist, E. Z. Opener Bag Co., Braithwaite, La.  
 Goldman, J. A., B.S. in M.E. 2nd Lieut., C. A. R. C.  
 Goodman, L. B., B.C.S. Western Union T. & T. Co., Atlanta, Ga. Asst. to Div. Traf. Eng.  
 Goree, A. W., B.S. in E.E. 1st Lt., 17 M. G. Bat., U. S. A.  
 Greenfield, J. C., Jr., B.S. in C.E. Student Flying Div., Av. Corps.  
 Grist, A. C., B.S. in M.E. Av. Sect., U. S. Signal Corps.  
 Hawkes, W. M., B. S. in E.E. Eng'r Dept., A. T. & T. Co., Hurt Bldg., Atlanta, Ga.  
 Henderson, T. H., Jr., B.S. in Arch. Architect for Tuxburg Lumber Co., Charleston, S. C.  
 Holt, E. Y., B.S. in E.E. 2nd Lt., C. A. C., U. S. A.  
 Howard, A. C., B.S. in M.E. Fairbanks-Morse Co., Toronto, Canada.  
 Huber, C. C., B.S. in Arch. 2nd Lt. 316th Field Art., Camp Jackson.  
 Illges, A., B. S. in T.E. 2 Lt., C. A. R. C., U. S. A.  
 Jackson, E. M., B. S. in Arch. Draughtsman, W. W. Leland Co., 220 Wadsworth Ave., New York.  
 Johnston, P. N., B.S. in M.E. 2nd Lt., C. A. R. C., U. S. A.  
 Jones, A. P., B.S. in E.E. Vinings, Ga.  
 Jones, R. A., B.S. in C.E. Contractor, Charlotte, N. C.  
 Jordan, R. C., Jr., B.S. in E.C. 1st Lt., C. A. C., U. S. A.  
 Keiser, A. C., B.C.S. Mgr. Ga. News Company, Ala. News Co., Atlanta, Ga.  
 Kirkpatrick, T. P., B.S. in E.E. and M.E. Av. Sect., Signal Corps, U. S. A.  
 Kollock, M. C., Jr., B.S. in Arch. 2nd Lieut., Artillery, Camp Gordon, Ga.  
 Landers, D. W., B.S. in E.E. Tel. Eng., American Tel. & Tel. Co., 195 Broadway, N. Y. City  
 Lucas, J., Jr., B.S. in E.E. 1st Lieut., Marine Corps.  
 McLemore, W. C., B.S. in M.E. Private 32nd Inf., Camp Jackson.  
 Manly, H. P., B.S. in M.E. Valve Dept., Baldwin Locomotive Works, Philadelphia, Pa.  
 Mansfield, L. E., B.S. in E.E. 2nd Lieut., Bat. C., 61 C. A. C., U. S. A.  
 Mellichamp, J. P., B.S. in M.E. and E.E. Sgt., First Class, Eng. R. C.  
 Merrill, K. A., B.S. in M.E. Merrill-Stephens Shipbuilding Co., Jacksonville, Fla.  
 Metcalf, J. L., B.S. in E.E. Naval Radio Service, U. S. N.  
 Mitchell, E. J., B.S. in E.E. Bethlehem Steel Co., So. Bethlehem, Pa.  
 Oehmig, E. W., B.S. in E.E. 2nd Lieut., Eng. R. C. 309 Eng. Train.  
 Paden, R. S., B.S. in E.E. Salesman, G. E. Co., Atlanta.  
 Pharr, M. A. Jr., B.S. in E.E. 2nd Lieut., C. A. C., U. S. R. (Deceased.)  
 Peloubet, W. F., B.S. in C.E. U. S. Marines, 69 Drill Co.  
 Perkins, F. A., B.S. in E.E. 2nd Lieut., C. A. R. C., U. S. A.

# Classes of 1916-'17

Ramsey, J. B., B.S. in C.E. Unknown.  
 Sellers, P. B., B.S. in E.E. U. S. A., Camp Jackson.  
 Senter, J. C., B.S. in M.E. 2nd Lieut., Aviation Sec., S. C.  
 Singleton, P. C., B.S. in M.E. U. S. N. R.  
 Smith, H. G., B.S. in E.E. Student Engineer, General Electric Co., Apt. 44, 799 Albany St., Schenectady, N. Y.  
 Span, I., B.S. in Arch. Terry Shipbuilding Co., Savannah, Ga.  
 Stanley, E. A., B.S. in E.E. 2nd Lieut., Eng. C., A. E. F.  
 Street, J. L., B.S. in E.E. 1st Lieut., S. R. C.  
 Stumberg, B. G., B.S. in T.E. Tallassee Falls Mfg. Co., Tallassee, Ala.  
 Sullivan, M. A., B.S. in M.E. Ship Draftsman, Brooklyn Navy Yard.  
 Summerlin, I. W., B.S. in M.E. Eng., Bureau Ord. Dept., Washington, D. C.  
 Taylor, G. C., B.S. in E.E. Instructor, School of Mil. Aeronautics.  
 Thompson, J. E., B.S. in E.E. Automatic Tel. Eng. W. U. T. Co., Memphis, Tenn.  
 Tisinger, T. F., B.S. in E.E. Captain, C. A. C., U. S. A.  
 Trussell, W. T., B.C.S. Assistant Chief Clerk, W. U. T. & T. Co., Atlanta, Ga.  
 Walden, C. O., B.S. in M.E. Sun Motor Co., Elkhart, Ind.  
 Williams, A. L., B.S. in Arch. Address unknown.  
 Wolcott, J. W., Jr., B.S. in Arch. Asst. Draftsman, Puget Sound Navy Yard, Bremerton, Wash.  
 Woodward, A. P., B.S. in Arch. 1st Class Private, Co. B., 42nd Eng., Camp Am. Univ., Washington, D. C.  
 Wootton, W. L., B.S. in E.E. Chief Tester, New York Edison Co., 130 E. 15th St., New York, N. Y.  
 Yopp, P. R., B.S. in M.E. Asst. Inspector of Eng. Material, Bureau of Steam Eng., U. S. Navy, Washington, D. C.

## CLASS OF 1917

Andrews, J. F., B.S. in E.E. Instructor in Radio, School of M. A. Ga. Tech.  
 Aubrey, W. H., B.S. in M.E. Draftsman, Frick Co., Waynesboro, Pa.  
 Barker, G. R., B.S. Captain, 43rd Infantry.  
 Barnes, R. E., B.S. in C.E. 2nd Lieut., 106th Eng., U. S. A.  
 Bird, S., B.S. in E.E. 2nd Lieut., C. A. C., U. S. A., A. E. F.  
 Bond, B. C., B.S. in T.E. Gov. Text. Insp., Brookside Mills, Knoxville, Tenn.  
 Bradley, F., Jr., B.S. in T.E. Inspector Textiles, Ord. Dept.  
 Casey, W. C., B.S. in M.E. 2nd Lieut., F. A. N. A.  
 Chalker, G. A., Jr., B.S. in M.E. 1st Lieut., F. A. N. A.  
 Cheney, H. W., B.S. in E.E. Gen. Mgr., Valdosta Mach. & Found. Co., Valdosta, Ga.  
 Cole, R. T., B.S. in M.E. 2nd Lieut., F. A. R. C.  
 Conrad, T. W., B.S. in Arch. 1st Lieut., C. A. C.  
 Cox, C. C., B.S. in M.E. 2nd Lieut., U. S. A. Bat. E. 81st F. A.  
 Cox, S. A., Jr., B.S. in M.E. Draftsman, Atlanta Utility Works, Atlanta, Ga.  
 Crawley, E. H., B.S. in M.E. Av. Sec. Sig. C., U. S. A. (Cadet).  
 Creson, R. F., Jr., B.S. in C.E. Jr. Eng., U. S. Geol. Survey, 1897 Peabody Ave., Memphis, Tenn.  
 Downing, C. D., B.S. in M.E. Corp. Co. E, 106th Eng., U. S. A.  
 Durant, H. H., B.S. in E.E. Unknown.



Ellis, J. L., Jr., B.S. in E.E. Commercial Eng'r., General Elec. Co., Ft. Wayne, Ind.  
 Farago, J., B.S. in E.E. Test Dept., G. E. Co., Schenectady, N. Y.  
 Flanigan, J. M., B.S. in E.E. 2nd Lieut., C. A. R. C., A. E. F.  
 Fox, C. F., B.S. in E.C. 2nd Lieut., C. A. R. C., A. E. F.  
 French, J. M., B.S. in C.E. Fletcher Savings & Trust Co., Indianapolis, Ind.  
 Gardner, H. H., B.C.S. Accountant, Am. Audit Co., Atlanta.  
 Gardner, T., B.S. in M.E. Navy Steam Eng'r. School.  
 Gee, H. W., B.S. in M.E. 2nd Lieut., C. A. R. C., Ft. Screven, Ga.  
 Girard, M. E., B.S. in E.E. 2nd Lieut., C. A. C., A. E. F.  
 Greenslade, W. M., B.S. in C.E. 1st Lieut., E. R. C., A. E. F.  
 Halliburton, R. A., B.S. in M.E. Marine Draftsman, Army Transport Service, War Dept., Washington, D. C.  
 Hammond, S. R., B.S. in M.E. 2nd Lieut., C. A. R. C., A. E. F.  
 Hardy, S. H., B.S. in E.E. Automatic Attendant, W. U. T. & T. Co., Atlanta, Ga.  
 Harris, H. H., B.S. in M.E. 2nd Lieut., Av. Sec. Sig. R. C.  
 Henderson, U. V., B.S. in M.E. Cadet Engineer, U. S. Coast Guard Academy.  
 Herrington, H. L., B.S. in E.E. 2nd Lieut., C. A. R. C., A. E. F.  
 Holleyman, W. C., Jr., B.S. in Arch. Captain, Constructing Quartermaster, 504 Penn. Bldg., Philadelphia, Pa.  
 Howel, W. G., B.S. in M.E. Master Gunner, C. A. N. A.  
 Jansen, J., Jr., B.S. in E.E. Supt. Elec. Plant, Ft. Gaines, Ga.  
 Jones, F. L., B.S. in E.E. Am. Tel. & Tel. Co., 1422 Hurt Bldg., Atlanta, Ga.  
 Jones, J. C., B.S. in M.E. 2nd Lieut., C. A. R. C., 61st Reg.  
 Kiplinger, C. G., B.S. in E.E. Special Investigator, Remington Arms Co., Eddyston, Pa.  
 Kuniansky, I., B.S. in E.E. Testing Dept., Am. Tel. & Tel. Co., Louisville, Ky.  
 Lane, W. A., B.C.S. 2nd Lieut., F. A. R. C.  
 Lawwill, J. A., B.S. in M.E. Eng'r., Bureau Gun Sect. Ord. Dept., U. S. A.  
 Levy, S. E., B.S. in M.E. 2nd Lieut., C. A. R. C., Ft. Screven, Ga.  
 Lowi, A. R., B.S. in E.E. Sgt., Sig. C., U. S. A.  
 MacDonald, J. E., B.S. in M.E. 2nd Lieut., O. Dept., N. Army.  
 Martin, R. A., B.S. in M.E. Atlanta, Ga.  
 Martin, W. B., B.S. in E.E. Sgt. Electrician, C. A. C.  
 Mason, J. R., B.C.S. Sgt., 5th Reg. Nat. Guard, Ga.  
 Mathes, W. C., B.S. in M.E. Insp. Sprinkler Dept., So. E. Underwriters Association, Atlanta, Ga.  
 Mathis, E. T., Jr., B.S. in M.E. 1st Lieut., O. R. C., Air Service, A. E. F.  
 Mauck, H. M., B.C.S. 1st Lieut., I. R. C.  
 Maupin, R. H., B.S. in T.E. Gov. Text. Insp., Tallassee Cotton Mills, Tallassee, Ala.  
 Miles, E. R. C., B.S. in E.E. Inst. Math. Dept., Ga. Tech., Atlanta.  
 Mitchell, J. T., B.S. in Arch. 2nd Lieut., 320 F. A. R. C.  
 Montague, F. D., B.S. in C.E. 2nd Lieut., E. R. C., A. E. F.  
 Moore, M. V., B.S. in C.E. 1st Lieut., E. R. C.

Moore, W. W., B.S. in M.E. 1st Lieut., E. R. C.  
 Morrison, D. E., B.S. in E.E. 2nd Lieut., C. A. C., Air Service.  
 Nesbit, N. H., B.S. in M.E. 2nd Lieut., C. A. C., Ft. Caswell, N. C.  
 Nimocks, R. G., B.S. in E.E. 2nd Lieut., S. R. C., A. S.  
 Palen, W. E., B.S. in M.E. Ambulance Service, S. S. U., 27 Par., B. C. M., France.  
 Pharr, W. E., B.C.S. Salesman, Am. Tobacco Co., Atlanta, Ga.  
 Phillips, E. B., B.S. in E.E. Inst. E. E., Ga. Tech., Atlanta.  
 Powell, R., B.S. in E.E. Teacher, Secondary Industrial School, Columbus, Ga.  
 Preas, R. A., B.S. in Arch. Insp. Newport News Shipbuilding and Dry Dock Co.  
 Puckhaber, E. F. J., B.S. in E.C. Chem. Serv. Ord. Dept., Washington, D. C., (American University).  
 Reynolds, W., Jr., B.S. in M.E. 2nd Lieut., C. A. R. C., U. S. A.  
 Riley, J. A., B.S. in M.E. U. S. Naval Reserves.  
 Robinson, R. E., B.S. in E.E. 2nd Lieut., C. A. R. C., A. E. F.  
 Seawright, P. E., B.S. in E.E. Sav. Elec. Co., Savannah, Ga.  
 Shadburn, M. L., B.S. in C.E. 2nd Lieut., U. S., R. A. E. F.  
 Sibert, Eugene, B.C.S. In Military Service.  
 Slaton, J. M., Jr., B.S. in M.E. 2nd Lieut., C. A. R. C., France.  
 Smith, H. Z., B.S. in E.E. Statesboro, Ga.  
 Sterne, L. M., B.S. in Chem. Chemist, Anniston Steel Co., Anniston, Ala.  
 Storz, J. F., B.S. in E.E. Ethel, La., Aviation Section.  
 Strother, A. C., B.S. in M.E. Air Sect. Sig. C., U. S. A.  
 Summers, R. J., B.S. in M.E. Deceased.  
 Tappan, G. W., Jr., B.S. in M.E. Radio Co., 307th Field Sig. Bat., U. S. A.  
 Taylor, R. G., B.C.S. Accountant, Ga. Ry. & Power Co.  
 Thornton, W. N., B.S. in E.E. Westinghouse Elec. & Mfg. Co., Pittsburgh. Address, 500 Todd St., Wilkesburg, Pa.  
 Turner, R. G., B.S. in C.E. 2nd Lieut., E. R. C.  
 Tutan, G. W., B.S. in C.E. Civil Eng'r., Savannah, Ga.  
 Upshaw, E. M., Jr., B.S. in M.E. 2nd Lieut., C. A. R. C.  
 Vandiver, C. W., B.S. in M.E. Jr. Eng., H. L. Doherty Co., New York, N. Y.  
 Wallace, R. O., Jr., B.S. in E.E. 1st Lieut., 325th Inf. R. C.  
 Wash, W. R., B.S. in M.E. With Goodyear Tire & Rubber Co., Akron, Ohio.  
 Watson, C. M., B.S. in M.E. 1st Lieut., C. A. C., U. S. A., A. E. F.  
 Werner, W. M., B.S. in C.E. 2nd Lieut., Eng. R. C.  
 White, F. M., B.S. in M.E. Unknown.  
 Wood, G. H., B.C.S. Private, Camp Gordon.  
 Woodruff, L. F., Jr., B.S. in E.E. and M.E. Supervising Eng. Organ., Camp Humphreys, Accotink, Va.  
 Woolley, V. Jr., B.S. in E.C. 2nd Lieut., Engineer Reserve Corps.  
 Younger, M. L., B.S. in E.E. Testman, G. E. Co., Schenectady, N. Y.

**SPECIAL ARCHITECTURE.**

**CERTIFICATES—TWO-YEAR COURSE.**

1913.

Russell, J. M., 2nd Lieut., F. A. R. C.

1914.

Lockwood, T. F., Jr., 29th Reg. Engineers.

1915.

Biggers, J. J., Architect, Valdosta, Ga.  
Fetner, S. R., Inspector, A. C. L. Ry., Pelham, Ga.  
Fulwood, C. W., 2nd Lieut., Av. Sec. S. C.  
Hill, G. M., Chief Inspector and Department Mgr. Solar Metal Products Co., Inc., Columbus, Ohio. Address, 856 Neil Ave.  
Jordan, H. H., W. T. U. Co., 912 Healey Bldg, Atlanta, Ga.  
Kwilecki, W. H., Architect, Bainbridge, Ga.  
Smith, E. O., 1st Lieut., F. A. R. C.  
Watts, C. S., Architect, 227 Gazette Bldg., Little Rock, Ark.

1916.

Fort, F. B., 2nd Lieut., A. S., S. R. C.  
Greene, L. E., Draftsman, Ben Price, Archt., Birmingham, Ala.  
Shelton, J. M., Draftsman, Robert Co., 913 Candler Bldg., Atlanta, Ga.

1917.

Bauman, A. B., Draftsman Construction Dept., Sou. R. R., Lexington, Ky., Box 117.  
Sandeford, R. H., Student Arch Dept., Columbia Univ., New York City.  
Strong, C. D., Fourth Officers Training Camp.

**SPECIAL TEXTILE.**

**CERTIFICATES—TWO-YEAR COURSE.**

1901.

Brunner, F. A., Augusta, Ga.  
Colvin, D. C., Olympia Mills, Columbia, S. C.  
Harrison, T. H., Unknown.  
McRae, B. W., Farming, Morven, Ga.  
Millett, R. S., With Roswell Mfg. Co., Roswell, Ga.  
Moore, J. L., Supt. of Plant, Sou. Bell T. & T. Co., Division No. 2, Charlotte, N. C.  
Ryals, S. G., Unknown.

1902.

Butler, H. G., Vice-Pres. and Mgr. John G. Butler Builders' Sup. Co. Savannah, Ga.  
Herman, J., Unknown.

250

1905.

Smith, H. C., Asst. Treasurer, Duncan Mills, Greenville, S. C.  
Reynolds, C. F., Sec. & Treas. A. L. & C. F. Reynolds; Sec. & Treas. Ogeechee Fert. Wks., Mayfield, Ga.

1906.

Barge, R. I., Fancy Grocer, Atlanta, Ga.  
Dean, J. F., Jr., Salesman, Fairbanks Co., Baltimore, Md.  
Hero, A. O., Southern Manager, Turner, Halsey Co., New York City; address, 407 Carondelet St., New Orleans.  
Yarbrough, J. E., Griffin, Ga.

1907.

Hero, L. P., Tree Surgeon.  
Simpson, E. H., Jackson, Miss.

1908.

Hightower, W. H., Thomaston Cotton Mills, Thomaston, Ga.  
Malhoit, R. G., Overseer Oakley Plantation, Avoca, La.  
Mattox, R. W., Jacksonville, Fla.  
McDonald, R. E., Jr., Supt. Anchor Mills, Huntersville, N. C.

1909.

Bell, S. I., Hammond & Gregg Co., Columbia, S. C.  
Hero, N. C., Mfg. Jeweler, 1316 Gilpin St., Denver, Colo.  
Johnson, A. E., Columbus, Ga.  
Moore, H., General Fire Ext. Co., Atlanta, Ga.  
McPhaul, L. J., Cotton Buyer, Poulan, Ga.  
Morgan, R. A., Asst. Mgr. Gate City Cotton Mills, Atlanta, Ga.  
Steinheimer, L. M., 2nd Lieut. Quartermaster Corps, N. A., St. Louis, Mo.  
Wolfe, P. B., Cotton States Belting & Supply Co., Atlanta, Ga.

1910.

Ensign, C. W., 2nd Lieut., F. A. R. C.  
Erwin, H. M., Fulton Bag & Cotton Mills, Dallas, Texas.  
Hellams, R. V., U. S. Bureau of Standards, Washington, D. C.  
Murphy, Wm., Unknown.

1911.

Cushman, H. G., Greenville, S. C.  
Duval, J. B., Cost Dept., Fulton Bag & Cotton Mills, Atlanta, Ga.

1912.

Barrett, Thos., III., Capt. 326th Inf.  
Gary, Winder, 2nd Lieut., Av. Sec.  
Treadaway, W. L., Engineer, Southeastern Underwriters' Assn., Atlanta, Ga.

1913.

Adair, C. A., Cashier & Auditor Disbursements, Armour Fertilizer Works, Box 115, Jacksonville, Fla.

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# Georgia School of Technology

Floyd, T. B., Mgr. Cotton Mill & Elec. Plant, Putnam Mills and Power Co., Eatonton, Ga.

Grouse, H. C., Buyer, I. Epstein & Bros. Co., Savannah, Ga.

1914.

Hudgins, T. B., Cost Accountant, Victor Moneghan Mills, Greenville, S. C.

1915.

Barker, B. S., Jr., Mech. Eng'r., Am. Cast Pipe Co., Birmingham, Ala.

Broadnax, J. C., Foreman of Operations, Elec. Furnace Dept., An-niston Steel Co. Address, 501 E. 6th St.

1915.

Camp, R. A., Cotton Buyer, Winder, Ga.

Wier, V. N., Private, C. A. C.

1916.

Alexander, J. C., 2nd Lieut., I. R. C.

Champion, W. C., Poughkeepsie, N. Y.

Preas, J. H., United States Navy Yard, Norfolk, Va.

Sharpe, D. S., 2nd Lieut., I. R. C.

Suggs, I. Y., Bremen, Ga.

1917.

Aiken, F. D., Jr., Quartermaster, 1st Class, U. S. N. R.

Betts, J. L., 2nd Lieut., C. A. C.

Dang, T. Y. T., Proprietor Luckie St. Laundry, Atlanta, Ga.

Fuller, W. G., Private, Co. A., 122nd Infantry.

Hero, G. A., Jr., Aviation Section, U. S. N. R. F.

Robinson, W. P., Overseer, Finishing Dept., Postex Cotton Mills, Post, Texas.

Ross, C. H., 1st Class Machinist's Mate, U. S. N., A. E. F.

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