The New Hampshire College Announcement and Register

1916--1917
FORTY-EIGHTH YEAR

REGISTER, - - 1915-1916
ANNOUNCEMENT, 1916-1917

Durham, New Hampshire
Published by the College
The
New Hampshire College
of
Agriculture and the Mechanic Arts Bulletin

Durham, New Hampshire

APRIL, 1916

Entered as second class matter, August 5, 1907, at the Post Office at Durham, N. H., under the Act of Congress of July 16, 1894
### CALENDAR 1916

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
</tr>
<tr>
<td>11 12 13 14 15</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
<td>12 13 14 15 16</td>
</tr>
<tr>
<td>19 20 21 22 23</td>
<td>21 22 23 24 25</td>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>AUGUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>9 10 11 12 13</td>
<td>8  9  10 11 12</td>
<td>7  8  9 10 11</td>
</tr>
<tr>
<td>14 15 16 17 18</td>
<td>15 16 17 18 19</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
</tr>
<tr>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
<td>22 23 24 25 26</td>
<td>21 22 23 24 25</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>NOVEMBER</th>
<th>DECEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>9 10 11 12 13</td>
<td>8  9  10 11 12</td>
<td>7  8  9 10 11</td>
</tr>
<tr>
<td>14 15 16 17 18</td>
<td>15 16 17 18 19</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
</tr>
<tr>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
<td>22 23 24 25 26</td>
<td>21 22 23 24 25</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>

### 1917

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
<td>6  7  8  9  10</td>
</tr>
<tr>
<td>13 14 15 16 17</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
<td>12 13 14 15 16</td>
</tr>
<tr>
<td>19 20 21 22 23</td>
<td>21 22 23 24 25</td>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>AUGUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>9 10 11 12 13</td>
<td>8  9  10 11 12</td>
<td>7  8  9 10 11</td>
</tr>
<tr>
<td>14 15 16 17 18</td>
<td>15 16 17 18 19</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
</tr>
<tr>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
<td>22 23 24 25 26</td>
<td>21 22 23 24 25</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>NOVEMBER</th>
<th>DECEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6  7  8  9  10</td>
<td>9 10 11 12 13</td>
<td>8  9  10 11 12</td>
<td>7  8  9 10 11</td>
</tr>
<tr>
<td>14 15 16 17 18</td>
<td>15 16 17 18 19</td>
<td>14 15 16 17 18</td>
<td>13 14 15 16 17</td>
</tr>
<tr>
<td>22 23 24 25 26</td>
<td>23 24 25 26 27</td>
<td>22 23 24 25 26</td>
<td>21 22 23 24 25</td>
</tr>
<tr>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
<td>28 29 30 31</td>
</tr>
</tbody>
</table>
COLLEGE CALENDAR.

1916.

First Semester.

Entrance Examinations begin ................................................................. Tuesday, September 5.
Registration Day ................................................................. Wednesday, September 13.
Address to Student Body ................................................ Wednesday, September 14.
Meeting of Trustees ....................................................... Wednesday, October 11.
Columbus Day .............................................................. Thursday, October 12.
College closes at noon ................................................... Wednesday, November 29.
College opens at noon .................................................. Monday, December 4.
College closes, 4 p. m. ...................................................... Friday, December 22.

1917.

College opens at noon .................................................. Monday, January 8.
Meeting of Trustees .................................................. Wednesday, January 10.
Midyear Examinations begin ................................................ Monday, January 22.
Midyear Examinations close ................................................ Saturday, January 27

Second Semester.

Registration Day ................................................................. Monday, January 29.
Washington's Birthday .................................................. Thursday, February 22.
No exercises after 10 a. m. ................................................ Tuesday, March 13.
College closes, 4 p. m. ................................................... Wednesday, April 4.
Meeting of Trustees .................................................... Wednesday, April 11.
College opens, 8 a. m. ...................................................... Tuesday, April 17.
Junior Promenade begins, 4 p. m. .................................... Thursday, May 10.
Junior Promenade closes, 2 p. m. ...................................... Sunday, May 13.
Graduation Two-year Course ................................................ Wednesday, May 16.
Memorial Day, ................................................................. Wednesday, May 30.
Senior Examinations close, 4 p. m. ...................................... Tuesday, June 5.
Final Examinations begin ................................................ Monday, June 4.
Final Examinations close ................................................ Saturday, June 9.
Baccalaureate Sermon ....................................................... Sunday, June 10.
Class Day ....................................................... Tuesday, June 12.
Meeting of Trustees ................................................... Tuesday, June 12.
Commencement Day ...................................................... Wednesday, June 13.
BOARD OF TRUSTEES.

His Excellency, Governor ROLLAND H. SPAULDING, LL.D., ex-officio.


*Hon. HARVEY L. BOUTWELL, B.S., LL.D., Malden, Mass., President.
   Sept. 1, 1911, to Sept. 1, 1917.

Hon. JAMES A. TUFTS, A.B., Exeter, Secretary.

Hon. WALTER DREW, Colebrook.

*Hon. EDWARD H. WASON, B.S., D.Sc., Nashua.
   Jan. 16, 1906, to July 1, 1916.

Hon. GEORGE H. BINGHAM, A.B., LL.B., Manchester.

Hon. RICHARD W. SULLOWAY, A.B., Franklin.
   Oct. 9, 1915, to Oct. 9, 1918.

Hon. WILLIAM H. CALDWELL, B.S., Peterborough.
   Oct. 9, 1913, to Oct. 9, 1918.

Hon. JOHN W. PRENTISS, Alstead.

Hon. WILLIS McDUFFEE, A.B., Rochester.

Hon. DANA J. BROWN, Ossipee.
   July 17, 1914, to July 17, 1917.

Hon. DWIGHT L. HALL, A.B., Dover.

OFFICERS OF ADMINISTRATION.

CHARLES H. PETTEE, A.M., C.E., LL.D., Dean of the College.
FREDERICK W. TAYLOR, B.Sc. (Agr.), Dean of Agricultural Division.
CHARLES E. HEWITT, B.S., M.M.E., Dean of Engineering Division.
ERNEST R. GROVES, A.B., B.D., Dean of Arts and Science Division.
NELLIE E. GOLDSWORTHY, B.S., Ph.D., Dean of Women.
WALTER M. PARKER, A.B., Treasurer.
JOHN C. KENDALL, B.S., Director of Experiment Station and Extension Work.

* Elected by the Alumni Association.
OFFICERS OF INSTRUCTION.

CHARLES W. STONE, A.M., Superintendent of Farm.
OSCAR W. STRAW, Superintendent of Power and Service and Curator of Buildings.
CONDA J. HAM, A.B., Registrar and Secretary of the Faculty.
OREN V. HENDERSON, Business Secretary.

ASSISTANTS IN ADMINISTRATION.
MARTHA F. EMERSON, Librarian.
CHARLOTTE A. THOMPSON, Assistant Librarian.
MARcia N. SANDERS, Matron of Smith Hall.
ELIZABETH P. DeMERITT, Matron of Ballard Hall.
NATHANIEL E. CURTIS, Proctor of Fairchild Hall.
ANNIE J. MORGAN, Manager of Book Store.
VELMA W. DAVIS, Secretary to the President.
BEATRICE M. RICHMOND, Bookkeeper.
BEULAH M. MADDOX, Stenographer.
MARTHA C. BLODGETT, A.B., Secretary to the Dean.

THE COLLEGE FACULTY* AND TEACHING STAFF.

PROFESSORS.†
CHARLES H. PETTEE, A.M., C.E., LL.D., Dean and Professor of Mathematics.
CLARENCE W. SCOTT, A.M., LL.D., Professor of History.
FREDERICK W. TAYLOR, B.Sc. (Agr.), Dean of Agricultural Division and Professor of Agronomy.
RICHARD WHORISKEY, Jr., A.B., Professor of Modern Languages.
CHARLES E. HEWITT, B.S., M.M.E., Dean of Engineering Division and Professor of Electrical Engineering.
ERNEST R. GROVES, A.B., B.D., Dean of Arts and Science Division and Professor of Sociology.
FRED RASMUSSEN, B.S.A., Professor of Dairying.
C. FLOYD JACKSON, B.S., M.A., Professor of Zoology and Entomology.
WALTER C. O'KANE, A.M., Professor of Economic Entomology.
CHARLES JAMES, F.I.C., Professor of Chemistry.
WILLARD J. FISHER, Ph.D., Professor of Physics.
ALFRED E. RICHARDS, Ph.D., Professor of English.
ORMOND R. BUTLER, Ph.D., Professor of Botany.
JOSEPH H. GOURLEY, M.S., Professor of Horticulture.
OTTO L. ECKMAN, B.S. (Agr.), Professor of Animal Husbandry.

* The faculty is composed of the president of the college, full professors, associate professors, assistant professors, and the director of the experiment station and of extension work.
† Arranged in order of seniority of appointment.
GUY C. SMITH, Ph.B., Professor of Economics.
JOHN C. KENDALL, B.S, Director of Experiment Station and Extension Work.
ERIC T. HUDDLESTON, B. Arch., Professor of Drawing and Design.
SAMUEL J. SUTHERLAND, First Lieutenant U. S. Infantry, Professor of Military Science and Tactics.
CHARLES L. SIMMERS, B.A., Professor of Education and Psychology.
ROY H. PORTER, B.S., M.E., Professor of Mechanical Engineering.
WILLIAM H. COWELL, B.S., Physical and Athletic Director.
KARL W. WOODWARD, A.B., M.F., Professor of Forestry.
NELLIE E. GOLDFTHWAITE, B.S., Ph.D., Dean of Women and Professor of Home Economics.

ASSOCIATE PROFESSORS.†
FRANK C. MOORE, A.B., Associate Professor of Mathematics.
GEORGE A. PERLEY, M.S., Associate Professor of Chemistry.
CHARLES C. STECK, A.B., M.S., Associate Professor of Mathematics.

ASSISTANT PROFESSORS.†
WILLIAM H. WOLFF, M.S., Assistant Professor of Pomology.
FRANK E. McKONE, B.S., Assistant Professor of Mechanical Engineering.
LEON W. HITCHCOCK, B.S., Assistant Professor of Electrical Engineering.
FREDERICK W. WHITMAN, A.B., Assistant Professor of Modern Languages.
CAROLINE A. BLACK, Ph.D., Assistant Professor of Botany.
ROBERT V. MITCHELL, B.S., Assistant Professor of Animal Husbandry in charge of Poultry.
HAROLD H. SCUDDER, B.S., Assistant Professor of English.
FORD S. PRINCE, B.S., Assistant Professor in Agronomy.
FRIEDA REINER, B.S., Assistant Professor in Home Economics.

INSTRUCTORS.†
THOMAS J. LATON, B.S., Instructor in Drawing.
W. ROSS WILSON, B.S. (Agr.), Instructor in Dairying.
JAMES H. CAHILL, Instructor in Machine Work and Forging.
OLUS J. STEWART, Ph.B., A.B., M.S., Instructor in Chemistry.
JOHN B. SCHERRER, B.S., Instructor in Vegetable Gardening.
CLEMENT MORAN, A.B., Instructor in Physics.
CHARLES H. OTIS, Ph.D., Instructor in Botany.
CONDA J. HAM, A.B., Instructor in Economics.

† Arranged in order of seniority of appointment.
OFFICERS OF INSTRUCTION.

HARRY P. YOUNG, B.S., Instructor in Agronomy.
JAMES MACFARLANE, Instructor in Floriculture.
CLIFFORD J. FAWCETT, B.S., Instructor in Animal Husbandry.
LYMAN J. BATCHELDER, Instructor in Wood Shop and Foundry Practice.
CHARLES FIELD SCOTT, B.S., Instructor in Political Science.

ASSISTANTS.

CHARLES H. BATCHELDER, B.S., M.S., Assistant in Zoology.
CLARENCE R. CLEVELAND, A.B., Assistant in Economic Entomology.
ARTHUR S. AMBROSE, B.S., Assistant in Dairying.
ARNOLD J. GRANT, B.S., Assistant in Chemistry.
RAYMOND J. BEAN, B.S., Assistant in Zoology.
ALBERT W. GAMASH, B.S., Assistant in Forestry.
ARNOLD E. BARTLETT, B.S., Assistant in Modern Languages and Mathematics.
NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION.

THE STATION STAFF.

JOHN C. KENDALL, B.S., Director.
F. W. TAYLOR, B.Sc. (Agr.), Agronomist.
FRED RASMUSSEN, B.S.A., Dairyman.
B. E. CURRY, A.B., Chemist.
W. C. O'KANE, A.M., Entomologist.
J. H. GOURLEY, M.S., Horticulturist.
K. W. WOODWARD, A.B., M.F., Forester.
O. R. BUTLER, Ph.D., Botanist.
E. G. RITZMAN, B.S., Animal Husbandman.
W. H. WOLFF, M.S., Assistant Horticulturist.
T. O. SMITH, A.B., Assistant Chemist.
C. H. OTIS, Ph.D., Assistant Botanist.
J. B. SCHERRER, B.S., Assistant in Vegetable Gardening.
FORD S. PRINCE, B.S., Assistant Agronomist.
C. R. CLEVELAND, B.S., Assistant Entomologist.
HARRY P. YOUNG, B.S., Assistant Agronomist.
JAMES MACFARLANE, Florist.
A. W. GAMASH, B.S., Assistant Forester.

Assistants to the Staff.

MARTHA F. EMERSON, Librarian.
O. V. HENDERSON, Purchasing Agent.
BEATRICE M. RICHMOND, Bookkeeper.
LAURA B. BICKFORD, Stenographer.
ELIZABETH E. MEHAFFFEY, Assistant Librarian and Mailing Clerk.
BEATRICE E. CARLISLE, Stenographer.
THE EXTENSION SERVICE.

GENERAL EXTENSION STAFF.

J. C. KENDALL, B.S., Director of Extension Work.
J. B. ABBOTT, M.S., State Leader, County Agent Work.
W. P. DAVIS, In Charge Dairy Cow Test Association Work.
C. L. LONG, M.S., In Charge Orchard Demonstrations.
R. E. BATCHELDER, B.S., In Charge Movable Schools.
SARAH L. BATES, In Charge Extension Work in Home Economics.
E. M. STRAIGHT, B.S.A., In Charge Vegetable Garden Demonstrations.
M. C. WILSON, Farm Management Demonstrator.
B. B. RICHARDSON, B.S.A., Assistant in Boys’ Club Work.

County Agents.

H. N. WELLS, County Agent, Sullivan County.
F. N. DARLING, B.S., County Agent, Cheshire County.
E. T. LEWIS, County Agent, Coos County.
A. B. PIKE, County Agent, Belknap County.
A. G. DAVIS, County Agent, Merrimack County.
R. D. LONG, B.S., County Agent, Rockingham County.
A. W. BENNER, County Agent, Grafton County.

Assistant to the Staff.

JANET E. McDONALD, Stenographer.
HISTORICAL SKETCH.

The New Hampshire College of Agriculture and the Mechanics Arts was created by an act of the New Hampshire legislature in 1866 and was established at Hanover as a state institution, in connection with Dartmouth College. In its foundation the state legislature had accepted the conditions of an act of the federal congress of July 2, 1862, entitled "An act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts." The state had accepted the land grant three years earlier, July 9, 1863.

In 1893 the college was moved from Hanover to Durham. This action followed the death of Benjamin Thompson of Durham, a farmer, who died January 30, 1890, and left his entire estate, with a few minor reservations, to the college. The legislature accepted this bequest March 5, 1891, and appropriated the necessary money for the first buildings.

Mr. Thompson wrote in his will, "My object being mainly to promote the improvement of agriculture, though willing that the college to be established should also provide for the mechanic arts, it is my will that the institution to be established by the state . . . shall be called and designated . . . The New Hampshire College of Agriculture and the Mechanic Arts, if that shall be the wish of the state; and that in addition to the instruction to be given therein, as provided by my said will, there shall be taught only such other arts or sciences as may be necessary to enable said state to fully avail itself of said donation of lands by the government in good faith, which two branches of instruction shall be the leading objects of said institution or college."

Shortly before the state accepted this bequest of Mr. Thompson the legislature further provided for the college by accepting the provisions of an act of congress known as the
Morrill Bill. This legislation made available federal appropriations "for instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

Although the college was able to make use of the Thompson land as early as 1893, it was not until 1910 that the income from this endowment of almost $800,000 became available. At present the college has an annual income from the Thompson funds of nearly $32,000, the moneys which are available as the result of the acts of congress referred to, and the biennial appropriations of the state legislature.

The college administration is in charge of a board of thirteen trustees. The governor of the state and the president of the college are ex-officio members; the college alumni elect two, and the others are appointed by the governor with the advice and consent of the council.

A branch of the college, known as the New Hampshire Agricultural Experiment Station, was established by the state, August 4, 1887, under an act of congress of March of that year. Its purpose is to acquire agricultural knowledge and to bring its information to the people of the state. The station is actively engaged in this work not only in Durham but throughout the commonwealth. Members of the agricultural faculty of the college serve on the station staff. There is also an extension department with a staff of nineteen who are devoting their entire time to demonstration work on the farm, in the home and to agricultural clubs.

When the college came to Durham it had but twenty-seven students and a faculty of but thirteen members. At present its students number six hundred and fifty-three and its faculty fifty-seven. Its growth, at first slow, has been constant always, and in the last three years the college has about doubled the number of its students and greatly increased its equipment.
GENERAL INFORMATION.

Situation.—Durham, the home of the college, is on the Portland division of the Boston and Maine railroad, sixty-two miles from Boston and five miles from Dover.

Courses.—The college is a part of the public school system of the state, continuing the work of the high school, and it is open to both men and women. In accord with the origin and function of the college, its courses are essentially practical, leading directly to the student's preparation for a successful livelihood.

I. Agricultural Division.
   a. Four-Year Courses.
      1. Animal Husbandry and Dairying.
      2. Forestry.
      3. Horticulture.
      4. General Agriculture and Agricultural Teaching.
   b. Two-Year Course in Agriculture.
   c. Five-Week Course in Dairying.
   d. Four One-Week Winter Courses in Agronomy, Forestry and Horticulture.
   e. Farmers’ One-Week Course.

II. Arts and Science Division.
   a. Four-Year Courses.
      1. General Arts and Science.
      2. Home Economics.
      3. Mechanic Arts for Teachers.

III. Engineering Division.
   a. Four-Year Courses.
      1. Chemical Engineering.
      2. Electrical Engineering.
      3. Mechanical Engineering.
   b. Two-Year Courses.
      1. Industrial Electricity.
      2. Industrial Mechanics.
### STUDENT EXPENSES.

<table>
<thead>
<tr>
<th>Item</th>
<th>Women</th>
<th>Juniors</th>
<th>Sophs</th>
<th>Fresh</th>
<th>1st 2-yr.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room rent</td>
<td>$57.00</td>
<td>$58.55</td>
<td>$50.83</td>
<td>$48.81</td>
<td>$44.71</td>
<td>$53.88</td>
</tr>
<tr>
<td>Board</td>
<td>138.59</td>
<td>152.20</td>
<td>145.08</td>
<td>148.03</td>
<td>114.03</td>
<td>145.05*</td>
</tr>
<tr>
<td>Books, stationery</td>
<td>15.47</td>
<td>19.90</td>
<td>15.67</td>
<td>16.20</td>
<td>18.59</td>
<td>17.19</td>
</tr>
<tr>
<td>Laboratory fees</td>
<td>4.50</td>
<td>5.21</td>
<td>7.70</td>
<td>4.00</td>
<td>2.30</td>
<td>3.61</td>
</tr>
<tr>
<td>Laundry, pressing, mending</td>
<td>3.00</td>
<td>8.50</td>
<td>13.70</td>
<td>8.28</td>
<td>6.02</td>
<td>8.15</td>
</tr>
<tr>
<td>Incidents, Coll. activities</td>
<td>31.33</td>
<td>26.62</td>
<td>21.75</td>
<td>20.58</td>
<td>8.86</td>
<td>20.30</td>
</tr>
<tr>
<td>Athletics</td>
<td>2.93</td>
<td>5.07</td>
<td>4.54</td>
<td>3.83</td>
<td>3.78</td>
<td>4.00</td>
</tr>
<tr>
<td>Traveling expenses</td>
<td>21.33</td>
<td>25.00</td>
<td>20.95</td>
<td>20.56</td>
<td>30.13</td>
<td>23.77</td>
</tr>
<tr>
<td>Clothing</td>
<td>64.90</td>
<td>34.71</td>
<td>44.00</td>
<td>42.17</td>
<td>31.46</td>
<td>43.84</td>
</tr>
<tr>
<td>Other expenses</td>
<td>20.31</td>
<td>50.33</td>
<td>20.25</td>
<td>19.45</td>
<td>27.31</td>
<td>22.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$357.36</strong></td>
<td><strong>$396.09</strong></td>
<td><strong>$344.39</strong></td>
<td><strong>$331.91</strong></td>
<td><strong>$287.19</strong></td>
<td><strong>$342.69</strong></td>
</tr>
</tbody>
</table>

To this should be added:

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Fees</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Military uniforms, new men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.00</td>
<td>19.00</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>$437.36</strong></td>
<td><strong>$476.00</strong></td>
<td><strong>$424.39</strong></td>
<td><strong>$430.91</strong></td>
<td><strong>$386.19</strong></td>
<td><strong>$422.69</strong></td>
</tr>
</tbody>
</table>

The above tabulation of student expenses is a serious attempt on the part of the college to inform prospective students and their parents as accurately as possible concerning this very important consideration connected with a college course. The tabulation is based upon the actual experience of a number of students from each of the named classes, carefully chosen in order that a normal expenditure per student in any group might be obtained. Ten questions were asked of each one and the replies averaged to secure the results shown in the table. This list of questions included traveling expenses, and an item for clothing, which were asked not because these expenditures are at all uniform as between individuals, but rather because the college realizes that they are important items to take into consideration when planning for a year's expenses. These are usually not included by colleges in similar statements. When comparing expenses at New Hampshire College with other institutions, approximately $70 should be deducted from the average of $422.69, in order to reduce it to the same

*These averages are for four-year students. Averages for two-year men who are here a shorter time and whose expenses for board are less, are not taken into the computation.
basis. This may be further reduced by $60 for such students as secure scholarships.

**Tuition and Fees.**—Tuition is $60 a year; incidental fees are $20 a year. They are payable in advance in two equal instalments, one on the first day of each semester. By vote of the trustees, all members of the senior class are assessed a graduation fee of $5.00. Fees for supplies and breakage are assessed in chemical and other courses as the facts warrant.

**Dormitories.**—The college has two dormitories for women and one for men. All rooms are heated, lighted and furnished with the exception of bed linen, quilts and towels, which are provided by the individual students. In most cases, two students occupy a room or suite of rooms. Prices range from $50 to $80 for each student per year. Applications for rooms in the dormitories should be made directly to Mr. O. V. Henderson, business secretary of the college. Early application is necessary in order to secure a choice of rooms. Rooms in private families may be secured for about the same prices as for those in dormitories. Less desirable, but comfortable rooms may be obtained by men in several private dormitories at a somewhat less figure.

Women students, unless living at home, are required to room in one of the women's dormitories, or in approved houses. Each dormitory is equipped with a laundry for the use of the girls.

**Board.**—All women students board at Smith Hall, paying about $4 per week. The men board in clubs at prices ranging from $4 to $5 per week.

**Scholarships.**—Scholarships are awarded each semester for the purpose of aiding deserving students. Recently, the large increase in student attendance has utilized to the full all scholarships thus far provided. However, the trustees are anxious to supply scholarships to all really needy young men and women in New Hampshire. In order to do this, they necessarily require full information of all applicants in order that those able to pay may yield to those not so favorably situated.
GENERAL INFORMATION.

These scholarships will be forfeited at any time for misconduct, or for the use of intoxicating liquor or tobacco. They will also be withdrawn from students in all four-year courses who fail to secure an average grade of sixty in any one semester, and, only in cases of special financial necessity, will they be restored by the president.

Conant Scholarships.—There are twenty-seven Conant scholarships, each paying tuition, $60; fees, $20; cash, $20,—total, $100. These are assigned under the following conditions:

They are to be given to young men taking agricultural courses.

Each town in Cheshire County is entitled to one scholarship, and Jaffrey is entitled to two.

They will be reserved for their respective towns until August 1 of each year. Those not taken by students from Cheshire County, and those in excess of the number of towns, will then be assigned to agricultural students from other parts of the state, and may be divided at the discretion of the president.

Senatorial Scholarships.—There are twenty-four senatorial scholarships, one for each senatorial district. Each scholarship is to pay tuition of $60, and when released is at the disposal of the senator from that district. Senatorial scholarships are open to residents of the state and to students in all courses.

Grange Scholarships.—For several years a scholarship paying tuition of $60 has been placed at the disposal of each subordinate and Pomona Grange in New Hampshire, for the use of a four-year or two-year student. When vacated by graduation or otherwise, the grange may assign the scholarship to another applicant. Each scholarship is to pay the tuition of $60. The method of appointment is entirely at the option of the grange; it may be by election, competitive examination, or otherwise. Holders of these scholarships need not be members of the grange, but must be resident within the state.

Valentine Smith Scholarships.—Through the generosity of the late Mr. Hamilton Smith of Durham, the sum of
$10,000 has been given to the college to establish the Valentine Smith scholarships.

"The income thus accruing to the college shall be given to the graduate of an approved high school or academy who shall, upon examination, be judged to have the most thorough preparation for admission to the college; provided,

"That if the student receiving this scholarship shall at any time prove unworthy, in the judgment of the faculty, by reason of defective scholarship or character, he shall forfeit his claim to the student most deserving; and

"That if the student receiving this scholarship shall cease to be a member of the college, the income from this fund, for the unexpired term, shall be awarded to the student most deserving in character and scholarship."

By vote of the faculty, these scholarships will be forfeited by failure to obtain an average grade of 75 per cent. for any semester. These scholarships yield $400 annually or one hundred dollars to each holder. Competitive examinations for this scholarship will be held June 27, 28, 29, 30, 1916, in Durham, Keene, Laconia, Lancaster, West Lebanon, and Manchester. Examinations are not restricted to citizens of New Hampshire. For examination schedule see page 41.

State Scholarships.—By an annual scholarship appropriation of $3,000, the state provides free tuition for fifty New Hampshire students. These scholarships are awarded strictly on the basis of financial need. Applicants must furnish full information in relation to their own financial status and that of their parents.

Prizes.—Bailey Prize.—Dr. C. H. Bailey of Gardner, Mass., and E. A. Bailey, B.S., of Keene, N. H., offer a prize of ten dollars for proficiency in chemistry.

Erskine Mason Memorial Prize.—Mrs. Erskine Mason of Stamford, Conn., has invested one hundred dollars as a memorial to her son, a member of the class of 1893, the income of which is to be given, for the present, to that member of the senior class who has made the greatest improvement during his course.
Chase-Davis Memorial Medals.—In the spring of 1909 the Glee Club voted to present a gold and a silver medal yearly to the college in memory of Carl Chase, ’09, of Webster, an enthusiastic member of the New Hampshire football team and the Glee Club, and of John Worthen Davis, ’11, of Concord, who were drowned in Great Bay, December 7, 1908.

According to the terms of this gift, the gold medal is to be awarded to the senior who has won an “N. H.” and stands highest in his studies, and the silver medal is to be awarded to the senior who has won an “N. H.” and stands second in his studies. These medals are for excellence in athletic competition primarily, and the number of times a man wins an “N. H.” during his college career shall be of importance in making the award.

Individual Drill Prizes.—First—A gold medal given by the college. Second—A silver medal given by the college. Third—A bronze medal given by the college.

Junior Officer’s Prize.—A saber, with belt complete, given to the junior cadet officer who excels in executing certain required movements or evolutions with a company.

Chi Omega Prize.—The Chi Omega Sorority of New Hampshire College offers a prize of ten dollars for the best thesis on a sociological subject written by a woman student in sociology 52, 54, or 58.

Lillian S. Edwards Prize.—A fund has been provided by Mrs. Lillian S. Edwards of Sanbornville for the publishing and distribution of the best thesis on a sociological subject written by a student for the Department of Sociology during the second semester of the college year 1915–1916.

College Aid to Students.—Students obtain considerable financial aid by janitorships, by table work at boarding clubs and by work on the farm and in the greenhouse. They also find employment with the power and service department of the college and with the experiment station. However, so much depends upon the individuality of the student that the college can guarantee absolutely nothing in any particular case.
Students may purchase at cost all books, drawing instruments, materials, etc., at the college book-store in Thompson Hall.

Registration.—Undergraduate students are required to register before 4 p. m. of the first day of each semester. For the first time in the history of the college, arrangements have been made to register by mail during the summer, so that a student may attend to this matter before returning in the autumn.

Registration will open on July 1, and continue until the beginning of the school year. Students desiring to register by mail or in person after July 1, should write the registrar for registration blanks, which when filled out should be forwarded to the business secretary together with the student’s remittance for his semester’s tuition, and fees.

Any former student who registers after the first day of a semester will be charged for such registration a fine of one dollar for the first day and fifty cents additional for each succeeding day, to be remitted only by the president upon presentation by the student of a substantial excuse for delay.

Warnings are Reports of Standings.—At the end of the first five weeks of the first semester new students are warned officially by the registrar of all studies in which their work has been unsatisfactory. Warnings of unsatisfactory work are also sent to all students near the middle of each semester. When a student has received warnings in more than seven hours of work in any semester, his parents or guardians are also notified.

Reports of standing are sent to parents and guardians at the close of each semester.

Attendance at Convocation, Military Drill and Physical Culture Classes.—Attendance at convocation is required of all students. Attendance at military drill is required of all men and at physical culture classes of all women unless members of the senior class or unless excused on account of physical disability. Certificates of disability must be
obtained of the physician designated by the college, and must be renewed annually.

**Military Department.**—This department is in charge of an officer of the United States regular army, detailed by the War Department, as a professor of military science and tactics. Military instruction, which is required by law, is both theoretical and practical, the former having special reference to the duties of the line.

The organization is a regiment of two battalions of three companies each, having a band, signal detachment, and officered by cadets selected for character, soldierly bearing, and efficiency. The federal government has furnished U. S. magazine rifles, model 1898, and equipment. Attention is paid to rifle practice, the government supplying ample ammunition and target materials, and the college a range within four minutes' walk of the college buildings, with firing points at 200 and 300 yards. The rolling country in the vicinity of the college furnishes opportunities for extended order drill and field exercises, the athletic field for close order drills, and the gymnasium gives room for indoor work.

The cadets wear when on duty, and may at other times, an olive drab cloth uniform as prescribed by standing orders in the War Department. The cost of a uniform for the new student is $19.00 not including shoes, and its use may make possible a saving in civilian clothing.

Service in this department is optional for members of the senior class. Seniors who elect drill and are appointed cadet officers have their college fees refunded at the end of the semester if their work has been satisfactory. Seniors who elect drill and are not appointed cadet officers are not required to be armed or to drill in the ranks, but will attend all drills and perform such duties as may be required of them.

Upon the graduation of each class the names of those students who have shown special aptitude for military service are reported to the adjutant-general of the army and to the adjutant-general of the state, and they receive a special certificate for military proficiency.
BUILDINGS AND EQUIPMENT.

BUILDINGS.

The college is housed in twelve large buildings scattered over a handsome campus. Of these buildings, six are devoted to offices, recitation rooms or laboratories; one is the large armory and gymnasium; two are dormitories for women; one the new dormitory for men, one the library, containing the books of the college and the town of Durham, and one the home of the experiment station. Besides these there are the college barn, several smaller barns, an insectary, a poultry laboratory, poultry houses, and a range of greenhouses.

Fairchild Hall. The latest addition to the college buildings is the $60,000 dormitory for men. This building, named in honor of the president of the college, is a handsome brick structure of colonial design, which furnishes accommodations for 106 men.

No item of necessary dormitory equipment has been forgotten. There are shower baths on each floor and some suites have private toilets. A large general assembly room has been provided for the use of the occupants of the building. The student rooms are furnished, heated and lighted and are cared for by a competent assistant. They are arranged mainly in suites consisting of chamber and study.

Thompson Hall is the main administration building and from its eminence commands a view of the entire campus. It contains besides recitation rooms the offices of the president, the dean, the registrar, the business secretary, the bookstore, and the headquarters of the departments of modern languages, mathematics, zoölogy, economic entomology, and home economics. The third floor has been recently fitted up as a gymnasium for women.
DeMeritt Hall, the new engineering building, was completed in 1914 at a cost of $80,000. It is the most prominent of the engineering group and houses the departments of mechanical engineering, electrical engineering, physics, and drawing. It contains lecture, recitation, drawing, and office rooms for the several departments; also numerous electrical, mechanical and physical laboratories, each one adapted to and equipped for its specific work.

Conant Hall is devoted exclusively to the department of chemistry. The second floor, containing lecture rooms and three laboratories, remains substantially as it has been for a number of years. The first floor has been recently fitted up with modern chemistry desks and other equipment to supply much needed additional laboratory facilities for chemical students. The building is thus well equipped for carrying on the chemical courses of the college, including those connected with agriculture, home economics, and chemical engineering.

Morrill Hall is the headquarters of the agricultural department of the college and also has the office of the director of the experiment station and the experiment station library. In this building are the laboratories and lecture rooms of the departments of agronomy, animal husbandry, horticulture, poultry husbandry, and forestry. The building also contains a collection of farm implements and a cattle judging room. The third floor has been finished off and now provides quarters for agricultural extension workers; a reading room for agricultural students and The Agricultural Club Room.

Nesmith Hall is occupied by the departments of chemistry and botany of the experiment station and contains the laboratories and lecture rooms of the department of botany of the college.

The Shop Building contains a wood shop, a machine shop, a forge shop, a foundry, the boiler house, and a general repair shop connected with the curator’s department.
The Armory contains the lecture rooms and offices of the military department, the rooms of the College Club and a large drill hall and gymnasium.

The Dairy Building is arranged and equipped in the most up-to-date and sanitary manner. It contains a commercial creamery, with sanitary milk room, separator room, churning room, and cold storage room; laboratories for instruction in milk testing, milk inspection, farm butter and cheese-making, and bacteriology; a reading and exhibition room; class room, and offices.

Smith Hall and Ballard Hall are the two dormitories for women, each under the supervision of a competent matron. Smith Hall was made possible by the generosity of Mrs. Shirley Onderdonk, of Durham, who gave $16,000 as a memorial to her mother, Mrs. Alice Hamilton Smith. The remainder of the cost, $10,000, was provided by the state. The building has rooms for thirty-two girls, dining accommodations for seventy-five, and a large reception room which provides a social centre for the occupants.

Ballard Hall was formerly a privately owned fraternity house, the largest in Durham. It has been purchased by the college, remodelled, entirely refitted, and furnishes accommodations for forty-five girls. There is a reception room and a large music room for social use.

The Library. In accordance with an act of consolidation between the libraries of Durham and the college, the books of the Durham public library and the college are all shelved in one building, forming the Hamilton Smith Public Library. This consolidation makes an especially good collection, the scientific books of the college supplementing well the more popular books of the town library. The consolidated libraries number about 35,000 volumes and the reading room is supplied with 100 periodicals. The departments of sociology, of history and political science, and of economics are located in the library building.
Aside from the main library, each department has its working library of the more technical books and journals.

**EQUIPMENT.**

**Agronomy.**—For the teaching of farm equipment and machinery, this department is provided with drainage levels for laying out drains, plane tables for making farm maps, polar planimeters for measuring plotted areas, a dynamometer and several other pieces of apparatus for studying draft problems. For farm crops work it has a very complete collection of dried specimens of the different forage crops, and the more important varieties of corn, wheat and oats. Seed testing apparatus, grass charts and other illustrative material form a part of the equipment.

A new combined lantern and reflectoscope, together with a large number of lantern slides, has recently been installed in the lecture room.

The soil physics laboratory is equipped with soil bins, a compacting machine, chemical and torsion balances and various kinds of physical apparatus for the study of soils, including that for the determination of specific gravity and for the making of mechanical analyses.

The agricultural museum contains the old original “Daniel Webster plow” and other primitive models. It also contains many of the latest types of farm machinery, including plows, cultivators, harrows, mowers, planters, corn and grain binders, gasolene engines, a thresher, manure spreader, etc., also different kinds of cattle ties, and various makes of woven wire fences.

The college farm, with its 385 acres of land, has a variety of soils suited for the growth of many farm crops. Land on nearby farms is rented for the growing of corn and potatoes so that good opportunities are afforded for practical work and demonstration in the production of field crops.

**Animal Husbandry.**—For the various courses in animal husbandry an extensive use is made of the live stock of the college farm. The dairy herd consists of representative
animals of the following breeds: Ayrshires, Guernseys, Jerseys and Holsteins. The college owns nine horses representing the draft type, and in order to become acquainted with the carriage and roadster types, the students are taken to various stock farms where these types may be inspected and judged. For the study of the different breeds of sheep, the experiment station flock is used. For the study of swine students are taken to nearby farms, since at the present the college owns no swine.

In the agricultural building a large room is fitted up for the judging of live stock, and score cards with a scale of points for each kind of animal are used.

The class room is provided with a stereopticon lantern and a large collection of lantern slides is used to show the leading individuals of the different breeds of live stock. The herd books of the most prominent breeds are used for the purpose of familiarizing the student with methods of tracing pedigrees and the practices of breeders' associations.

Poultry.—As a result of a special appropriation by the legislature several years ago, a poultry plant has been established. This consists of a number of colony houses, two permanent houses and a laboratory building containing an incubator cellar and killing and dressing room. There are about 400 birds representing the following breeds: Barred Plymouth Rocks, Rhode Island Reds, White Leghorns and Light Brahmas. Students are given practical instruction in judging the various breeds, handling of incubators and construction of poultry houses.

Botany.—The department of botany has the usual laboratory equipment to meet the needs of the courses in general botany, plant physiology and bacteriology. In the advanced courses, owing to the connection of the department with the experiment station, students will find both the laboratory and greenhouse equipment ample for critical studies on plant diseases and plant nutrition.

Chemistry.—The several chemical laboratories are fairly well equipped. Each is supplied with most of the forms of
apparatus required for its particular work. Besides all necessary glass and porcelain ware, this includes water baths, drying ovens, combustion, muffle and assay furnaces, platinum dishes and crucibles, polarscope, spectroscope, balances, lantern and other lecture appliances.

Dairying.—The dairy department, with its new dairy building, offers excellent opportunities for instruction in technical and practical dairy work. The college creamery is well equipped with up-to-date machinery, each machine being run by a separate electric motor.

In addition to the product of the college herd, milk and cream are received from over forty farms in Durham and vicinity. By this arrangement sufficient material is furnished for practical work. The farm dairy is equipped with the leading makes of hand separator and hand and small power churns suitable for private dairies. The milk testing and milk inspection laboratory is equipped with Babcock testers, sediment testers, acidimeters and other apparatus necessary for inspection of milk and cream for fat and other qualities. The Bacteriological Laboratory has the equipment necessary for work in dairy bacteriology.

Drawing.—The department of drawing is well equipped to meet the needs of the subjects offered. The drafting rooms are supplied with tables and lockers and the free-hand drawing studio with suitable stands and easels. For engineering and machine drawing there is an excellent collection of working models and machine parts, and various machines in other departments are available for this work. For free-hand drawing there is a good supply of geometric models, and for advanced work in charcoal drawing the nucleus of a good collection of plaster casts exists, consisting of historic ornament, details of plant and animal life and of the human form. For special work in this subject there is available the museum of casts, consisting of examples of antique and modern sculpture.

Electrical Engineering.—The laboratory for electrical engineering occupies the ground floor of the south end of
the new engineering building. It has a total area of about 4,500 square feet. There is one room 104 by 36 feet for dynamo electric machinery. In this main dynamo room there is a large new distributing switchboard, on which are mounted instruments, switches, circuit breakers, ground detectors, synchronizers and plugging devices so arranged that it is possible to connect the various rooms and convey thereto direct current and single, two-phase and three-phase alternating current of different voltages and frequencies.

In addition to this main dynamo room there is a room used for photometry, one for storage battery and one for high potential experiments. The laboratory also includes an instrument room, a mechanician’s room and a dark room.

The general equipment of the laboratory includes various dynamos and motors for both direct and alternating currents, several transformers, the necessary measuring instruments and storage batteries, adapted to the needs of students taking this course.

In addition to the regular laboratory equipment, there is available for testing purposes a fully equipped sub-station having a capacity of 75,000 watts supplied by the Rockingham County Light and Power Company, of Portsmouth, N. H. A part of this equipment consists of an automatic induction feeder regulator, including contact making voltmeter and reversing switch.

Farm Department.—An institution like New Hampshire College is not complete without a well-equipped, well-organized and properly managed farm. The farm serves as a laboratory for much of the agricultural instruction, where approved farm methods in practice may be seen and where the students may gain experience by actually performing the work with their own hands.

The New Hampshire College farm comprises about 385 acres, of which about 100 are in forest and woodland; about 45 are occupied by the campus and athletic field; about 95 are tillage land; and about 145 are pasture land. Twenty-four acres of the pasture land are occupied by the animal husbandry department of the station and about 16 acres by
the college reservoir. Twenty-two acres of the tillage land are used by the horticulture, agronomy and animal husbandry departments of the station.

Two farms, one comprising about 40 acres of tillage land and 160 acres of pasture, the other about 30 acres of tillage and 40 acres of pasture are rented by the farm department.

The farm buildings consist of a large storage barn, two 125-ton silos, a well-appointed, sanitary dairy stable which will accommodate 38 cows, and a basement under the main barn for housing young stock and dry cows. A building 60 by 18, with individual yards, has been erected for caring for the herd bulls. A horse barn 36 by 67 with basement and hay storage loft is occupied by the farm and horticulture departments.

Forestry.—The demand for instruction in forestry at the college has been increasing from year to year and the legislature of 1911 provided for a separate department of forestry. It is now possible to educate and, in a measure, train agricultural students in scientific forestry. The course is intended to provide not only a special training in forestry, but a broad general training in other lines of agriculture closely related to it. For those who desire to make forestry their life work, every encouragement and assistance will be given. Additional work at some graduate school of forestry is now almost a necessity, owing to the large number of men entering the profession today.

Durham is well situated with reference to the study of woodlot forestry. All types of native second-growth forests are found nearby and the college owns a tract of 60 acres of old-growth timber where exceptional opportunities are given for the study of mature forests. There are other areas where practice will be given in establishing plantations of forest trees by various methods. A nursery for the growing of seedling forest trees has been established.

All the necessary instruments for making forest maps and measurements, together with collections of wood specimens, lantern slides and photographs, are available in connection with this work.
Home Economics.—The home economics department is located in two large rooms in Thompson Hall. The food laboratory, is fitted with work desks, storage cupboards and apparatus for cooking. The desks are built in cabinet form to hold the necessary utensils and materials for each student. Each table is fitted with both gas and electric stoves and ovens.

The cooking utensils are of the materials best suited to the use of each. Standard measuring apparatus and scales are provided.

A storage cabinet is provided with bins for supplies and cupboard space for large utensils.

The sewing equipment consists of sewing machines, cabinets, tables, and dress-forms.

Various educational exhibits, both food and textile, are owned and used by the department for illustrative purposes.

The reference library of books, bulletins and journals is deposited partly in this room and partly in the main library.

Mechanical Engineering Department.—The main office of the Mechanical Engineering department is located on the second floor of DeMeritt Hall. On this floor is the drafting room equipped with twenty-four drafting tables, where the advanced work in drawing and design is given. In addition there are two lecture rooms with a seating capacity for twenty-five students. One of the lecture rooms being equipped with a stereopticon lantern and screen so that illustrated lectures may be given in various subjects.

In the basement of the building is located a Mechanical Engineering laboratory the north end of which is given over to a stock and instrument room and a materials testing room. This latter room contains a 50,000-pound Riehle tension testing machine, a machine for transverse testing materials, a Fairbanks cement testing machine, a chemical balance and instruments for making analytical tests of fuel, oil, and gas.

The main room is given over to steam, gas, and hydraulic testing. The present equipment consists of a 12-horse
BUILDINGS AND EQUIPMENT.

power 4-cycle gasolene engine, also a 5-horse power 2-cycle gasolene engine, Westinghouse air compressors, condenser and pumps, a Westinghouse single acting steam engine, a 10-horse power high-speed steam engine, a wier tank, platform scales and tanks for weighing of water. This equipment will be added to from time to time. In addition to this equipment we have a supply of steam engine indicators, gas engine indicators, gages and thermometers, pyrometers and other small apparatus.

Physics.—Besides the necessary furniture the department is supplied with the usual small tools, calipers, scales, balances, weights, hydrometers, calorimeters, thermometers, etc., and with other apparatus for the performance in the laboratory of experiments in mechanics, heat, sound, light, magnetism and electricity.

The lecture room has a small but growing collection of apparatus for the illustration, both experimentally and with the projection lantern, of the laws of matter and energy in their various relations, and of the history of physics.

Instruction is carried on by means of lectures, with mimeographed outlines furnished to students and constantly kept up to the development of the subjects; recitations and discussions based on standard text-books, and experimental work in the laboratory. Mimeographed outlines are furnished for the laboratory experiments, with concise directions and references; and reports are written by the students on the results of their experiments, for examination and criticism by the teacher.

The physics department occupies all of the west wing of the new engineering building. In the basement there are a large laboratory room for intermediate work in subjects yet to be developed, two small rooms for individual work, a switchboard room, a room for storage battery and for chemical work, and a storage room. On the first floor are the general elementary laboratory, partly divided off into small rooms for work in light or for balances, a room for apparatus storage, the office and a recitation room. On the second floor are the lecture room and a room for the storage of lec-
ture apparatus. The lecture room will seat about one hundred.

**Shopwork.**—The wood shop is equipped with thirty-three benches and complete sets of tools for 160 students. Each bench is equipped with modern vises. Other equipment consists of a universal pattern maker's saw, board-planer, buzz-planer, band saw, speed-lathes and a large pattern maker's lathe with boring attachment.

The equipment of the machine shop consists of engine lathes, speed-lathe, vertical drill, planer, large universal milling machine, plain milling machine, shaper, power hack saw, tool grinder, twelve benches with vises and bench lathes; and a large number of small tools, including micrometers, calipers and gages necessary for accurate work.

In the forge shop are seventeen Sturtevant down-draft forges with anvils and necessary tools. The blast to the forges is furnished by a No. 4 blower, and the smoke carried away by a 60-inch exhauster. These are driven by a small steam-engine.

All the shops are operated by 550-volt three-phase induction motors, suitably connected to line shafting and driving the tools by the "group plan."

**Zoölogy.**—This institution is favorably situated geographically for the study of zoölogy. Within a few minutes' walk of the laboratory is the Oyster river where it meets the tide water from Great Bay. This furnishes a gradation of salt, brackish and fresh water with an abundance of their characteristic fauna. Great Bay, the Piscataqua river and the open ocean are within easy access, and have their own peculiar, characteristic forms. On the other hand there are numerous bodies of fresh water, with typical fresh water forms.

The department of zoölogy is prepared to offer courses along the following lines: (A) systematic zoölogy; (B) physiology and sanitation; (C) philosophical zoölogy; (D) anatomical zoölogy.
The equipment for the work in systematic zoology consists of a well-lighted laboratory, provided with tables, charts, dissecting and compound microscopes. All of the latest books and periodicals on systematic zoology are at the student's disposal. The lecture room is fitted with a new reflectoscope capable of projecting opaque objects, text-book figures or lantern slides. The room has a seating capacity of eighty, and is provided with armed chairs which enable the students to readily take down notes and drawing. There is a fairly complete collection of local invertebrates, and a very good collection of the birds of New Hampshire. The work in systematic entomology is greatly aided by a large and complete collection of insects which is the property of the experiment station.

The proximity to both salt and fresh water renders the work in advanced systematic zoology unusually attractive. In addition to the regular collecting equipment, nets, aquaria, etc., advanced students also have the use of rowboats and a gasoline launch.

In the work in physiology, hygiene and sanitation the department is provided with an unusually fine collection of injected preparations of the human body, and with numerous charts. The same laboratory and equipment is used in this work as noted above.

For work in evolution and experimental zoology the department has a very complete library. Studies in ecology in Great Bay and vicinity are encouraged, for which purpose the students have the use of a camera equipment. In addition to the study of evolution under natural conditions the department also furnishes aquaria for laboratory study and experiments.

The work in anatomical zoology is greatly facilitated by an abundance of fresh material which may be collected as needed. For the study of human and comparative anatomy a full set of skeletons and preserved material is provided. Students interested in histology have access to a private collection of some two thousand microscope slides.
Museum.—The museum had for a nucleus the collection made during the state geological survey. To this additions have been made from various sources. Specimens are being collected to illustrate the zoölogy of New Hampshire, and New Hampshire collectors and naturalists are invited to make the museum the permanent depository of their collections.
FOUR-YEAR COURSES.

AGRICULTURAL DIVISION.

The courses of this division are designed for the general education and scientific training of students in the various economic branches of agriculture. The lecture and recitation work of the classroom is supplemented largely by practical exercises in the laboratories. Seminar studies are also given, especially for seniors and advanced students. The whole curriculum is so arranged that about one third of the studies may be termed cultural, one third, scientific, and one third, technical. During junior and senior years the student has elective options in certain courses of study which enable him to specialize in animal husbandry and dairying, horticulture, forestry or general agriculture.

While the two-year course is intended to give the student as thorough training in the science and practical details of farm operations as the time will allow, it does not give the opportunity for a broad general foundation of pure and applied science that the four-year courses afford; the latter courses aim primarily to combine a college education with that of a technical vocation. Many of the graduates of the four-year courses return to the farm for the purpose of putting into practice the knowledge and training of their college work, and many of them are becoming successful and prosperous citizens of the community; others who have no farms of their own accept salaried positions as superintendents or foremen on the dairy, fruit or truck farms of large owners; still others take positions as teachers of science and agriculture in our secondary and high schools or as assistants in our agricultural colleges and experiment stations.

The Agricultural Division offers the following four-year courses of study:
Animal Husbandry and Dairy Course.—This course is designed for those students who wish to specialize either in animal husbandry or dairying. Election of subjects between these two departments may be made throughout the junior and senior years. The dairy building with its new and complete equipment, together with the additional subjects and increased facilities for instruction in the animal husbandry department, make this course especially attractive.

Forestry Course.—The forestry course offers to students who have entered the agricultural division an opportunity to specialize in forestry during the junior and senior years. This arrangement allows the student to devote a large amount of time to the various branches of forestry, but at the same time requires a foundation of agriculture and the subjects upon which agriculture depends. The forestry department is located on the second floor of Morrill Hall. The college forest of sixty acres of old-growth pine and hemlock, and other areas of natural and planted growth, furnish the laboratory for the forestry student. Ample opportunity is given to study the various forest problems on the ground as well as in the classroom.

Horticultural Course.—This is the course for those students who contemplate making a speciality of some line of horticultural work. Several advanced subjects in botany will be required, while during the senior year opportunity will be given to elect subjects in other departments. The horticultural department is well equipped with gardens, orchards, greenhouses and laboratories for the study of the different phases of this industry, especially fruit growing, which is so prominent in the agriculture of the state.

General or Teaching Course in Agriculture.—This course is intended for students who desire to secure a general training in the science of agriculture without specializing along some particular line. Provision is made during both the junior and senior years for the student to elect one or more subjects in whatever department he wishes.
FOUR-YEAR COURSES.

The rapidly increasing demand for teachers in agriculture in our secondary schools has indicated the necessity of training men especially for this important line of work.

Beginning with September, 1916, eight hours of work in the department of education will be required during the junior year and five hours during the senior year of all students in the General or Teaching Course in Agriculture.

ARTS AND SCIENCE DIVISION.

In the Arts and Science Division the following courses are offered:

**General Arts and Science Course.**—This course provides a general college training which especially prepares for secondary school teaching, business or graduate study. By means of the group system of elective studies an opportunity is given the student to specialize in zoölogy, botany, chemistry, physics, drawing, agriculture, mathematics, modern languages, English, psychology, sociology, political science, economics, history, home economics, and education.

**Home Economics Course.**—The course in home economics furnishes instruction in the branches that especially serve the need of women students. The work is planned to meet the demands of the day for scientific training in home making, to fit students to enter fields of professional activity in educational and institutional lines of work, and to provide thorough training for those students who wish to elect home economics as either a major or a minor subject in the Arts and Science Course.

The technical work in household science is based upon the principles of physical, biological and social sciences. The subjects in foods, nutrition and dietetics require physics, chemistry and physiology; those in sanitation necessitate a knowledge of chemistry and bacteriology; home administration and the care and education of children, a knowledge of the principles of human nutrition and dietetics, principles of economics, psychology and sociology. The training in drawing, color, and design which is gained in the department
of drawing finds a worthy expression in the work in costume design and house decoration.

By the arrangement of studies, electives have been provided for in each year. The student is permitted three elective hours of work in the freshman year, six in the sophomore year, while more than half the total requirements for junior and senior years are electives. This large amount of elective work affords ample opportunity for the study of modern languages, history, mathematics, social and political sciences, or subjects of interest to women in other departments of the college. Provision is made for original problems in the senior year for students who are prepared for such studies.

**Mechanic Arts Course for Teachers.**—This course provides an opportunity for preparation for the teaching of Mechanic Arts and manual courses in secondary schools and institutions. It originated to meet the increasing demand for graduates of the college qualified to teach manual and mechanic arts courses. Although much of the work of this course is necessarily prescribed in such subjects as drawing, mathematics, shop work, English, psychology and education, a reasonable opportunity is given the student to elect other subjects in the Arts and Science Division. At the present time the demand for graduates from this course for secondary teaching is greater than the college can satisfy.

**ENGINEERING DIVISION.**

**Chemical Engineering Course.**—This course is intended to fit for the career of professional chemist or chemical engineer, and to give a good foundation for original and independent chemical research.

Instruction is imparted by lectures, recitations and a large amount of carefully supervised laboratory work. The laboratory study is largely an individual one and the work of each student is conducted with reference, not only to the particular object he may have in view, but also to the ac-
FOUR-YEAR COURSES.

quirement of a broad knowledge of chemical science. The student is given a thorough training in German and French to enable him to read with ease the chemical literature; a thorough grounding in mathematics, necessary for advanced theoretical chemistry or chemical engineering; a somewhat limited amount of special engineering work, both mechanical and electrical; and a thorough undergraduate training in theoretical and applied chemistry. He is encouraged to develop the power of solving chemical problems by independent thought through the aid of the reference works and chemical periodicals which the library contains.

Electrical Engineering Course.—The electrical engineering course is intended to meet the demands of young men fitting themselves for practical and professional engineering in connection with the various applications of electricity.

By means of lectures, recitations and laboratory work, the subjects of the course are brought to the attention of the student in such a manner as not only to emphasize the present needs of the practitioner and engineer, but to give him the groundwork that will enable him to grasp and understand the constantly increasing number of problems that require solution.

The instruction aims to impart a complete practical and theoretical knowledge of the best modern types of electrical machines and appliances and the methods of designing, building and operating them.

The rapid progress in recent years in applying electricity to commercial uses renders it difficult, if not impossible, for one without a technical education to gain prominence in the work and be intrusted with its more responsible positions.

Mechanical Engineering Course.—The mechanical engineering course is intended to train young men for positions of responsibility in the field of the mechanical industries. The studies in the course are scientific, including mathematics, physics and chemistry; technical, including
NEW HAMPSHIRE COLLEGE.

drawing, shop work, thermodynamics, hydraulics, machine design, electrical engineering, power engineering, and cultural studies, calculated to enable the technical man to take his proper place in the world of men.

Instruction is given by means of text-book work and laboratory work whenever possible. When necessary this work is supplemented by illustrated lectures and assigned reading. Throughout the course the theoretical work is supplemented by actual practice in mechanical operation and scientific research, by training in the use of tools for working wood and metals, and by experimental tests and demonstrations in the mechanical, chemical and physical laboratories.

POST-GRADUATE AND SPECIAL COURSES.

The college offers opportunity for post-graduate study in agriculture, biology and chemistry, and on the completion of satisfactory work advanced degrees will be given. Persons of mature years presenting satisfactory evidence of their ability to complete any desired course of study may be admitted as special students by vote of the faculty.

METHODS OF ADMISSION.

The New Hampshire College will admit without examination all candidates for admission who are graduates of high schools or academies of New Hampshire that are approved by the State Department of Public Instruction, provided the division entrance requirements of the college be met.

Graduates of schools specially approved by the college, will be admitted on the same terms as graduates of approved schools in New Hampshire.

Graduates of other high schools and academies will be admitted on passing examinations in fifteen units. However, the college can not agree to give examinations in certain vocational subjects involving mainly practical work, but may require special certification in such subjects.

Cases not covered by the above statements will be decided by the entrance committee of the faculty.
Candidates for advanced standing are admitted on the basis of the work completed at the institutions from which they come.

DIVISION UNIT REQUIREMENTS.

There are three divisions of New Hampshire College; the Agricultural, the Arts and Science, and the Engineering. These divisions are defined and described elsewhere in this announcement.

An entrance unit represents one study of four or five recitations a week for one year. It is assumed that two hours of manual training or laboratory work are equivalent to one hour of classroom work.

Candidates for admission to the freshman class of the various divisions of the college must show evidence, either by credentials or by examination, that they are prepared in fifteen units as indicated in the following table:

<table>
<thead>
<tr>
<th>Required Units</th>
<th>Agricultural Division</th>
<th>Arts and Science Division</th>
<th>Engineering Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A English,</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Group B Mathematics,</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Group C Social Science and History,</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Group D Natural Science,</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Elective Units</td>
<td>8</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total for admission,</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Elective units may be offered from groups A, B, C, D, and also from

- **Group E** Foreign languages, ancient or modern
- **Group F** Vocational subjects: agriculture, commercial subjects, domestic arts, mechanic arts.

However, not more than four vocational units will be accepted.
The credentials to be rendered by principals must state the time of graduation, the subjects studied, the number of entrance units in each, the grades attained by the student, and the passing grade of the school.

The credential forms to be used will be furnished by the college on application to the registrar.

The study of algebra and plane geometry may be combined as in Myers' textbook provided two units are offered for the combined work.

A candidate for admission to the Arts and Science Division who offers two units in a foreign language may substitute for the two units required in mathematics two units in either social or natural science, or one in each.

Candidates for admission to the Engineering Division may offer solid geometry for a part of the additional unit in mathematics. This is not required, but is highly advisable. Students presenting solid geometry as a part of the fifteen units required for entrance will be obliged to take an equivalent in hours for solid geometry (Mathematics 53). Students presenting solid geometry in addition to the fifteen units required for entrance may obtain credit for solid geometry (Mathematics 53), by passing a thorough examination. For the required unit in natural science, physics or chemistry is advisable.

Entrance by Examination.—Examinations will be given in subjects named in the groups A–F, in June and September at the college and in June at the following places also: Keene, Laconia, Lancaster, Manchester, West Lebanon.

Competitors for the Valentine Smith Scholarship (see page 15) must take the examinations in the seven units required in all divisions and in eight other elective units. These examinations must be taken in June, and may be taken at any one of the places mentioned above.

Requests for examinations should be forwarded to the Dean at least one week before the beginning of the examination period, and must state the names and addresses of the students, the places at which they will present themselves, and the examinations desired.
SCHEDULE OF EXAMINATIONS.

Tuesday, June 27, 1916.
Tuesday, September 5, 1916.
Mediaeval and Modern History
Elementary Algebra

English
Plane Geometry

Wednesday, June 28, 1916.
Wednesday, September 6, 1916.
English History
Physics

Elementary Latin
Advanced Latin

Thursday, June 29, 1916.
Thursday, September 7, 1916.
Chemistry
American History

French
Advanced Algebra

Friday, June 30, 1916.
Friday, September 8, 1916.
Ancient History
Solid Geometry

German
Botany

Examinations not scheduled will be arranged.

ENTRANCE REQUIREMENTS.

GROUP A. ENGLISH.

(The new requirements in English as stated below will take effect in September, 1916. Previous to that date the requirements will be as stated in the college catalogue for 1915-1916, pages 33 to 37 inclusive.)

The examination paper in English will be based upon the principle that the way to learn to write is to read.

All candidates will therefore be required to write a series of short themes which will show an adequate knowledge and thorough appreciation of certain great English classics as literature—as "the life blood of the mind." The classics selected are as follows: Shakespeare's Merchant of Venice, Henry V, and Macbeth; one novel each by Scott, Dickens, George Eliot, Stevenson, Cooper and Hawthorne; one essay each by Macaulay, Ruskin and Lowell; the subject-
matter and nature of the poetry of Wordsworth, Byron, Tennyson, Longfellow and Whittier.

As a special test in spelling, grammar, punctuation and paragraphing, the candidate will be required to write a short theme upon some subject pertaining to the home or school life of the average high school senior.

An optional question will be offered for the purpose of discovering the candidate's familiarity with the best modern periodical literature.

GROUP B. MATHEMATICS.

1. Elementary Algebra.—The four fundamental operations for rational algebraic expressions. Factoring, determination of highest common factor and least common multiple by factoring. Fractions, including complex fractions, and ratio and proportion. Linear and quadratic equations, both numerical and literal. Problems depending on linear and quadratic equations. Radicals, including the extraction of the square root of polynomials and of numbers. Exponents, including the fractional and negative.

2. Advanced Algebra.—The formula for the $n$th term and the sum of the terms of arithmetical and geometrical progressions, with applications. The theory and use of logarithms, without involving the use of infinite series. The binomial theorem for positive integral exponents. Complex numbers, with graphical representation of sums and differences. Determinants limited to simple cases. The elements of the theory of equations.

3. Plane Geometry.—The usual theorems and constructions of good textbooks, including the general properties of plane rectilineal figures; the circle and measurement of angles; similar polygons; areas; regular polygons, and the measurement of the circle. The solution of numerous original exercises including loci problems. Applications to the measurement of lines and plane surfaces.
4. Review Mathematics.—A general mathematics review during half of senior year is recommended, especially for students preparing for college engineering courses. A certificate covering the work of not more than one unit will be accepted for entrance. No examinations will be given.

5. Solid Geometry.—The usual theorems and constructions of good textbooks, including the relations of lines and planes in space; the properties and measurement of prisms, pyramids, cylinders and cones; the sphere and the spherical triangle. The solution of numerous original exercises including loci problems. Applications to the measurement of surfaces and solids.

6. Plane Trigonometry.—The subject matter of plane trigonometry as presented in good textbooks, including the solution of trigonometric equations of a simple character, the use of trigonometric equations of a simple character, the use of logarithms, the solution of right and oblique triangles, and practical applications.

GROUP C. SOCIAL SCIENCE AND HISTORY.

This group includes history, political economy, commercial law.

Although there are excellent textbooks in history, adequate preparation cannot be obtained by textbook work alone. Some collateral work is necessary, whatever textbook is used, and with certain textbooks a large amount is necessary. The details of the preparatory work in history are fully stated in A History Syllabus for Secondary Schools, by the New England History Teachers' Association. Boston, D. C. Heath & Co., 1904. Details are also stated in Standard Program for the Secondary Schools of New Hampshire, Department of Public Instruction, Concord, N. H.

1. Ancient History.—This may include the earliest nations and the period to 800 A. D., or it may be limited to
Grecian History and Roman History to the fall of the Western Roman Empire.

2. Mediaeval and Modern History.

3. English History.

4. American History and Civics.—The work may conform to the course in American constitutional history described in the Standard Program or to the course in American history developed in nearly a hundred pages of the Syllabus. It is assumed that in any case a reasonable amount of time is to be given to the study of the Constitution of the United States.

5. Political Economy.—(1) The study of a standard text. (2) At least six topics investigated by outside reading.

6. Commercial Law.—(1) Study of a standard text. (2) The study of a total of not less than thirty-six specific cases.

GROUP D. NATURAL SCIENCE.

A notebook, carefully kept and examined by the teacher, is an essential part of all laboratory work in science.

1. Botany.—The work in botany should consist of (1) the study of a standard text; (2) four or five exercises per week, at least one of which should be laboratory work. Either half of a year or an entire year's work will be accepted.

2. Chemistry.—Elementary inorganic chemistry. Should cover the commoner nonmetallic and metallic elements with their most important compounds, together with an introduction to the general theoretical principles. Calculations based upon changes of gaseous volumes and chemical equations. A year's work of four or five exercises per week, at least one of which should be laboratory work.

3. Physics.—The standard work in physics should consist of (1) The study of a standard text; (2) not less than
forty experiments worked out in the laboratory by each student and properly recorded in a suitable notebook.

4. Zoölogy.—A study of the fundamental principles of animal structure and the dissection of type forms. The student should become familiar with the characteristics of the various phyla of the animal kingdom. Four or five exercises per week, at least one of which should be laboratory work. Either half of a year or an entire year's work will be accepted.

GROUP E. FOREIGN LANGUAGES.

1. French.—Work of the first year should include (1) careful drill in pronunciation, (2) drill upon the rudiments of grammar, (3) abundant translation of simple English prose into idiomatic French, (4) reading of from 100 to 175 pages of French prose, (5) writing French from dictation. Work of the second year should include (1) the reading of from 250 to 400 pages of easy modern prose, (2) constant practice in translating from English into French variations of the text read, (3) frequent paraphrases of the text read, (4) dictation.

2. German.—Work of the first year should include (1) careful drill in pronunciation, (2) drill upon the rudiments of grammar, such as the inflection of the articles, the common nouns, adjectives, pronouns, and strong and weak verbs, upon the uses of the prepositions, the modal auxiliaries, and the rules of syntax and word order, (3) writing from dictation, (4) the reading of from 75 to 100 pages of prose, (5) translation from English into German. Work of the second year should include (1) the reading of from 150 to 200 pages of prose, (2) constant practice in translating from English into German variations of the text read, (3) dictation, (4) continued drill upon the rudiments of grammar, (5) frequent paraphrases of the text read.

4. Latin, Elementary.—Grammar and four books of Caesar. Two years' work.

GROUP F. VOCATIONAL SUBJECTS.

1. Agriculture.

Agronomy.—A textbook or lecture and recitation subject upon the formation, classification, composition, physical properties and tillage of soils; the kinds, use, value, and function of different chemical fertilizers; the use, composition, and preservation of farm manures; the planting, cultivation, harvesting, use, and marketing of the different kinds of field crops. The textbook and lecture work should be supplemented by field and laboratory exercises. Four or five periods per week for one year.

Animal Husbandry and Dairying.—A textbook and recitation subject upon the types and breeds of horses, cattle, sheep, swine, and poultry with practical exercises in stock judging; a study of the principles of feeding, the classification of animal foods, with practice in computing and mixing rations. Also a subject upon the composition, properties, care and handling of milk, with practical exercises in testing milk, cream, and butter with the Babcock test. Four or five exercises per week for one year.

Horticulture.—A textbook or lecture and recitation subject upon the classes and varieties of fruits; the location and fertilization of orchards; the pruning, grafting, and spraying of fruit trees, with some study of fungous and insect pests. Practical exercises in picking, packing, and marketing of fruit. Also a study in vegetable growing in which each student learns the classes, varieties, uses, and adaptations of our most important vegetables. Practical gardening work in growing vegetables. Four or five exercises per week for one year.

Rural Economics and Farm Management.—A textbook, lecture and recitation subject upon the economic relations of land, labor, and capital. A detailed study of the cost of producing and marketing farm and garden crops. Also a
study of the business end of farming, buying and selling methods, types of farming, systems of rotation, the keeping of farm accounts, and the making of inventories. Four exercises per week for one year.

2. Commercial Subjects.—Bookkeeping, commercial arithmetic, commercial geography, stenography, and typewriting.

3. Domestic Arts.—Foods and cookery, dressmaking, household sanitation and mechanical appliances, household economics, household design and decoration.

4. Mechanic Arts.—Casting, drawing, forging, machine work, molding, pattern-making, woodwork.

THESSES.

The preparation of a thesis upon some subject connected with the work of the division may be required of candidates for a degree by the division committee.

The subject of a thesis, together with a written approval by the head of the department concerned, must be filed with the registrar within one week of the opening of the second semester. The thesis is to be submitted to the head of the department not later than the second Tuesday preceding commencement day.

It is to be typewritten or printed upon standard thesis paper, eight and one-half by eleven inches, medium weight, and must be neatly bound in black cloth and gilt-lettered on the first cover with title, name of author, degree sought and year of graduation. This bound copy is to be filed and left with the college librarian before commencement day.

SENIOR STANDING AND DEFICIENCIES.

The regular work of the senior class, including the regular final examinations, is completed at 4 p. m. on the Tuesday of the week preceding commencement, and each member of the class may receive a statement of his standing at the office of the registrar at 2 p. m. on the following Thursday.
All deficiencies must be removed by 6 p. m. of the Saturday of the same week.

ADVANCED DEGREES.

Advanced degrees may be conferred upon candidates who have received the degree of B.S. from this college or any institution of like standing upon the fulfilment of the following requirements:

Degree of M.S.—The successful completion of a course of graduate study pursued in residence and approved by the faculty of the college.

The preparation of an original thesis satisfactory to the faculty of the college.

Degree of M.E.—Professional experience of at least four years.

The successful completion of a course of graduate study approved by the Engineering Division Committee.

The preparation of an original thesis satisfactory to the faculty of the college upon some subject approved by the Engineering Division Committee.

For details concerning the regulations governing the conferring of degrees address Dean C. H. Pettee.
REQUIREMENTS FOR DEGREES.

The degree of Bachelor of Science is conferred in the different divisions of the college upon completion of the following requirements:

Agricultural Division.
The completion of 140 semester hours:
The completion of the studies required in one of the following branches:

(a) Animal Husbandry and Dairying.
(b) Forestry.
(c) Horticulture.
(d) General Agriculture or Teaching Course.

Students graduating from the four-year courses in agriculture must present to the dean of the division on or before the second Tuesday preceding commencement satisfactory evidence of having had practical experience in farm work, either through having lived on a farm for a least two years subsequent to the age of 12 or through having worked on a farm for at least six months subsequent to the age of 16.

Students graduating from the Forestry Course must have spent at least three months in practical forest work, which time will be counted as a part of the six months requirement.

Arts and Science Division.
(a) General Arts and Science.

1. The completion of 132 hours, of which a minimum of 18 shall be required each semester of the freshman year and a minimum of 16 hours each semester thereafter.

2. The completion of English 51 and 52.

3. The completion of major and minor requirements as follows:
The Arts and Science courses are divided into three groups:

**Group I.**—Languages and Literature: English, French, German, Latin, Spanish.


**Group III.**—History, Social Science, Education and Psychology: History, Political Science, Economics, Sociology, Education, Psychology.

**Group Requirements.**
Each Arts and Science student shall elect at least 18 semester hours in each of the above three groups.

**Major Requirements.**
Each Arts and Science student shall, at the middle of his second year, select a department to be known as his major department.

In this major department, he shall complete 18 semester hours in which he shall make a grade of 70 or better.

In case of departments in which less work is offered than the amount required for the major, the shortage may be made up from such other related departments as the head of his major department may prescribe.

**Minor Requirements.**
Each student shall, with the approval of the head of his major department, elect for a minor 18 semester hours of subjects related to his major.

**Student Advisers.**
1. For Freshmen and First Semester Sophomores:
A committee of three faculty members shall be appointed by the dean of the Arts and Science Division to act as advisers for freshmen and first semester sophomores, and the elective slip of each must be approved by a member of this committee.

* Agricultural subjects as part of minor only.
2. For Second Semester Sophomores, Juniors, and Seniors:

A student shall have for his adviser the head of his major department; provided, that in case a student majors in a department outside the Arts and Science Division, his elective slip shall also be approved by the dean of the Arts and Science Division.

(b) Home Economics.
The completion of 132 semester hours.
The completion of the courses required in the Home Economics branch.

(c) Mechanic Arts for Teachers.
The completion of 140 semester hours.
The completion of the courses required in the Mechanic Arts Course for Teachers.

Engineering Division.
The completion of 144 semester hours, not including drill in the Junior Year.
The completion of the studies required in one of the following branches:

(a) Chemical Engineering.
(b) Electrical Engineering.
(c) Mechanical Engineering.

Additional Hours.

Students desiring to take additional hours, beside the minimum numbers stated in the programs of courses (page 109 and following), should consult their advisers. The advisers have discretion with regard to two additional hours; more than two are allowed subject only to the approval of a proper division committee.
# COURSES OF STUDY.

(For details, see Description of Studies which follow.)

## AGRICULTURAL DIVISION.

### All Courses.

**FRESHMAN YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 51</td>
<td></td>
</tr>
<tr>
<td>Drill 1</td>
<td></td>
</tr>
<tr>
<td>English 51</td>
<td></td>
</tr>
<tr>
<td>*French 1 or German 1</td>
<td></td>
</tr>
<tr>
<td>Mathematics 51a</td>
<td></td>
</tr>
<tr>
<td>Military Science 1</td>
<td></td>
</tr>
<tr>
<td>Zoology 51</td>
<td></td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td></td>
</tr>
<tr>
<td>Algebra and Trigonometry</td>
<td>4</td>
</tr>
<tr>
<td>Infantry Drill Regulations</td>
<td>1</td>
</tr>
<tr>
<td>General Zoology</td>
<td>3</td>
</tr>
</tbody>
</table>

**FRESHMAN YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 52</td>
<td></td>
</tr>
<tr>
<td>Drawing 54</td>
<td></td>
</tr>
<tr>
<td>Drill 2</td>
<td></td>
</tr>
<tr>
<td>English 52</td>
<td></td>
</tr>
<tr>
<td>*French 2 or German 2</td>
<td></td>
</tr>
<tr>
<td>Mathematics 54</td>
<td></td>
</tr>
<tr>
<td>Military Science 2</td>
<td></td>
</tr>
<tr>
<td>Zoology 52</td>
<td></td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td></td>
</tr>
<tr>
<td>Surveying</td>
<td>2</td>
</tr>
<tr>
<td>Manual of Guard Duty</td>
<td>1</td>
</tr>
<tr>
<td>Systematic Zoology</td>
<td>3</td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 51</td>
<td></td>
</tr>
<tr>
<td>Animal Husbandry 51</td>
<td></td>
</tr>
<tr>
<td>Botany 51</td>
<td></td>
</tr>
<tr>
<td>Chemistry 59</td>
<td></td>
</tr>
<tr>
<td>Drill 3</td>
<td></td>
</tr>
<tr>
<td>Military Science 3</td>
<td></td>
</tr>
<tr>
<td>Physics 51</td>
<td></td>
</tr>
<tr>
<td>Shop Work 53</td>
<td></td>
</tr>
<tr>
<td>Shop Work 55</td>
<td></td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Breeds of Live Stock</td>
<td>4</td>
</tr>
<tr>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Qualitative Analysis</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Mechanics and Heat</td>
<td>2</td>
</tr>
<tr>
<td>Wood Work</td>
<td>2</td>
</tr>
<tr>
<td>Forging</td>
<td>1</td>
</tr>
</tbody>
</table>

*Any four-year agricultural student who presents at least four years' work in two foreign languages for entrance may substitute other subjects for the French or German of the freshman year.*
FOUR-YEAR COURSES.

SOPHOMORE YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Animal Husbandry 52</td>
<td></td>
</tr>
<tr>
<td>Botany 52</td>
<td></td>
</tr>
<tr>
<td>Chemistry 60</td>
<td></td>
</tr>
<tr>
<td>Dairying 52</td>
<td></td>
</tr>
<tr>
<td>Drill 4</td>
<td></td>
</tr>
<tr>
<td>Horticulture 52</td>
<td></td>
</tr>
<tr>
<td>Horticulture 54</td>
<td></td>
</tr>
<tr>
<td>Military Science 4</td>
<td></td>
</tr>
<tr>
<td>Physics 52</td>
<td></td>
</tr>
</tbody>
</table>

*Animal Husbandry and Dairy Course.

JUNIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 53</td>
<td></td>
</tr>
<tr>
<td>*Animal Husbandry 55 or Dairying 53</td>
<td></td>
</tr>
<tr>
<td>Entomology 1</td>
<td></td>
</tr>
<tr>
<td>Drill 5</td>
<td></td>
</tr>
<tr>
<td>Forestry 51</td>
<td></td>
</tr>
<tr>
<td>Geology 51</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

JUNIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 52</td>
<td></td>
</tr>
<tr>
<td>Animal Husbandry 54</td>
<td></td>
</tr>
<tr>
<td>*Animal Husbandry 56 or Dairying 58</td>
<td></td>
</tr>
<tr>
<td>Botany 56</td>
<td></td>
</tr>
<tr>
<td>Dairying 54</td>
<td></td>
</tr>
<tr>
<td>Drill 6</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 55</td>
<td></td>
</tr>
<tr>
<td>Animal Husbandry 57</td>
<td></td>
</tr>
<tr>
<td>Economics 1</td>
<td></td>
</tr>
<tr>
<td>Meteorology 1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 54</td>
<td></td>
</tr>
<tr>
<td>Economics 8</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

* Elective.
### Forestry Course.

**JUNIOR YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 53</td>
<td></td>
</tr>
<tr>
<td>Drill 5</td>
<td></td>
</tr>
<tr>
<td>Entomology 1</td>
<td></td>
</tr>
<tr>
<td>Forestry 53</td>
<td></td>
</tr>
<tr>
<td>Forestry 55</td>
<td></td>
</tr>
<tr>
<td>Geology 51</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Dendrology</td>
<td>4</td>
</tr>
<tr>
<td>Silviculture</td>
<td>5</td>
</tr>
<tr>
<td>Elementary Geology</td>
<td>3</td>
</tr>
</tbody>
</table>

**JUNIOR YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 52</td>
<td></td>
</tr>
<tr>
<td>Botany 54</td>
<td></td>
</tr>
<tr>
<td>Drill 6</td>
<td></td>
</tr>
<tr>
<td>Forestry 52</td>
<td></td>
</tr>
<tr>
<td>Forestry 54</td>
<td></td>
</tr>
<tr>
<td>Horticulture 56</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soils</td>
<td>3</td>
</tr>
<tr>
<td>Plant Histology</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Silviculture</td>
<td>3</td>
</tr>
<tr>
<td>Forest Mensuration</td>
<td>3</td>
</tr>
<tr>
<td>Landscape Gardening</td>
<td>3</td>
</tr>
</tbody>
</table>

**SENIOR YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 57</td>
<td></td>
</tr>
<tr>
<td>Economics 1</td>
<td></td>
</tr>
<tr>
<td>Forestry 57</td>
<td></td>
</tr>
<tr>
<td>Forestry 59</td>
<td></td>
</tr>
<tr>
<td>Meteorology 1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Pathology</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Economics</td>
<td>3</td>
</tr>
<tr>
<td>Forest Protection</td>
<td>2</td>
</tr>
<tr>
<td>Practice of Forestry</td>
<td>3</td>
</tr>
<tr>
<td>Meteorology</td>
<td>2</td>
</tr>
</tbody>
</table>

**SENIOR YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 8</td>
<td></td>
</tr>
<tr>
<td>Forestry 56</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>Forest Management</td>
<td>4</td>
</tr>
</tbody>
</table>

### Horticultural Course.

**JUNIOR YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 53</td>
<td></td>
</tr>
<tr>
<td>Botany 53</td>
<td></td>
</tr>
<tr>
<td>Drill 5</td>
<td></td>
</tr>
<tr>
<td>Entomology 1</td>
<td></td>
</tr>
<tr>
<td>Forestry 51</td>
<td></td>
</tr>
<tr>
<td>Geology 51</td>
<td></td>
</tr>
<tr>
<td>Horticulture 53</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Crops</td>
<td>3</td>
</tr>
<tr>
<td>Plant Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Forestry</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Geology</td>
<td>3</td>
</tr>
<tr>
<td>Greenhouse Management</td>
<td>3</td>
</tr>
</tbody>
</table>
FOUR-YEAR COURSES.

JUNIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 52</td>
<td>Soils</td>
</tr>
<tr>
<td>Drill 6</td>
<td>Military Drill</td>
</tr>
<tr>
<td>Horticulture 56</td>
<td>Landscape Gardening</td>
</tr>
<tr>
<td>Horticulture 58</td>
<td>Nursery Management</td>
</tr>
<tr>
<td>Horticulture 60</td>
<td>Floriculture</td>
</tr>
<tr>
<td>Horticulture 68</td>
<td>Vegetable Forcing</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 55</td>
<td>Farm Management</td>
</tr>
<tr>
<td>Botany 57</td>
<td>Plant Pathology</td>
</tr>
<tr>
<td>Economics 1</td>
<td>Elementary Economics</td>
</tr>
<tr>
<td>Horticulture 55</td>
<td>Systematic Pomology</td>
</tr>
<tr>
<td>Horticulture 57</td>
<td>Evolution of Plants</td>
</tr>
<tr>
<td>Meteorology 1</td>
<td>Meteorology</td>
</tr>
</tbody>
</table>

SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 54</td>
<td>Fertilizers</td>
</tr>
<tr>
<td>Economics 8</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>Horticulture 62</td>
<td>Horticultural Seminar</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

General or Teaching Course.

JUNIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 53</td>
<td>Farm Crops</td>
</tr>
<tr>
<td>Drill 5</td>
<td>Military Drill</td>
</tr>
<tr>
<td>Education 1 or 3</td>
<td>History of Education</td>
</tr>
<tr>
<td>Education 5</td>
<td>Secondary Education</td>
</tr>
<tr>
<td>Entomology 1</td>
<td>Economic Entomology</td>
</tr>
<tr>
<td>Forestry 51</td>
<td>Principles of Forestry</td>
</tr>
<tr>
<td>Geology 51</td>
<td>Elementary Geology</td>
</tr>
</tbody>
</table>

JUNIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 52</td>
<td>Soils</td>
</tr>
<tr>
<td>Animal Husbandry 54</td>
<td>Feeds and Feeding</td>
</tr>
<tr>
<td>Dairying 54</td>
<td>Market Milk</td>
</tr>
<tr>
<td>Drill 6</td>
<td>Military Drill</td>
</tr>
<tr>
<td>Psychology 52</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>
NEW HAMPSHIRE COLLEGE.

SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 55</td>
<td></td>
</tr>
<tr>
<td>Economics 1</td>
<td></td>
</tr>
<tr>
<td>Horticulture 57</td>
<td></td>
</tr>
<tr>
<td>Meteorology 1</td>
<td></td>
</tr>
<tr>
<td>Psychology 53</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td>Farm Management</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Economics</td>
<td>3</td>
</tr>
<tr>
<td>Evolution of Plants</td>
<td>2</td>
</tr>
<tr>
<td>Meteorology</td>
<td>2</td>
</tr>
<tr>
<td>Adolescent Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 54</td>
<td></td>
</tr>
<tr>
<td>Economics 8</td>
<td></td>
</tr>
<tr>
<td>Education 4</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td>Fertilizers</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>School Hygiene</td>
<td>2</td>
</tr>
</tbody>
</table>

ARTS AND SCIENCE DIVISION.

General Arts and Science Course.

All elective except English 51 and 52, Drill and Military Science, and for women, Home Economics 1 and Physical Culture.

FRESHMAN YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 51 or</td>
<td></td>
</tr>
<tr>
<td>Drawing 51</td>
<td></td>
</tr>
<tr>
<td>Drawing 63</td>
<td></td>
</tr>
<tr>
<td>Drawing 67</td>
<td></td>
</tr>
<tr>
<td>Drill 1</td>
<td></td>
</tr>
<tr>
<td>English 51</td>
<td></td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Free-hand Drawing</td>
<td>2</td>
</tr>
<tr>
<td>House Planning</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>English Composition</td>
<td></td>
</tr>
<tr>
<td>and Rhetoric</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>French 1 or</td>
<td></td>
</tr>
<tr>
<td>German 1</td>
<td></td>
</tr>
<tr>
<td>History 1</td>
<td></td>
</tr>
<tr>
<td>Home Economics 1</td>
<td></td>
</tr>
<tr>
<td>Home Economics 3 or</td>
<td></td>
</tr>
<tr>
<td>Home Economics 5</td>
<td></td>
</tr>
<tr>
<td>Latin 1</td>
<td></td>
</tr>
<tr>
<td>Mathematics 51a</td>
<td></td>
</tr>
<tr>
<td>Mathematics 51b</td>
<td></td>
</tr>
<tr>
<td>Mathematics 55</td>
<td></td>
</tr>
<tr>
<td>Military Science 1</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 1</td>
<td></td>
</tr>
<tr>
<td>Livy</td>
<td>3</td>
</tr>
<tr>
<td>Algebra and Trigonometry</td>
<td>4</td>
</tr>
<tr>
<td>Trigonometry and Analytic Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Solid Geometry</td>
<td>2</td>
</tr>
<tr>
<td>Infantry Drill Regula-</td>
<td>1</td>
</tr>
<tr>
<td>tions</td>
<td></td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Course</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Spanish 1</td>
<td>3</td>
</tr>
<tr>
<td>Shop Work 51</td>
<td>2</td>
</tr>
<tr>
<td>Zoology 51</td>
<td>3</td>
</tr>
</tbody>
</table>

**FRESHMAN YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 52 or</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 56</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 58</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 64</td>
<td>2</td>
</tr>
<tr>
<td>Drawing 68</td>
<td>2</td>
</tr>
<tr>
<td>Drill 2</td>
<td>1</td>
</tr>
<tr>
<td>Economics 2</td>
<td>3</td>
</tr>
<tr>
<td>English 52</td>
<td>3</td>
</tr>
<tr>
<td>English 54</td>
<td>3</td>
</tr>
<tr>
<td>French 2 or German 2</td>
<td>3</td>
</tr>
<tr>
<td>History 2</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 2</td>
<td>2</td>
</tr>
<tr>
<td>Home Economics 4</td>
<td>1</td>
</tr>
<tr>
<td>Latin 2</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 52</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 54</td>
<td>2</td>
</tr>
<tr>
<td>Military Science 2</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture 2</td>
<td>1</td>
</tr>
<tr>
<td>Spanish 2</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 52</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 53</td>
<td>3</td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR, FIRST SEMESTER.**

All elective except Drill, Military Science and Physical Culture.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 51</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 57</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 59</td>
<td>2</td>
</tr>
<tr>
<td>Drawing 63a</td>
<td>2</td>
</tr>
<tr>
<td>Drawing 69</td>
<td>2</td>
</tr>
<tr>
<td>Drill 3</td>
<td>1</td>
</tr>
<tr>
<td>Economics 1</td>
<td>3</td>
</tr>
<tr>
<td>Education 1 or Education 3</td>
<td>2</td>
</tr>
<tr>
<td>English 53</td>
<td>3</td>
</tr>
<tr>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>Special Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Qualitative Analysis</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Free-hand Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Free-hand Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Elementary Economics</td>
<td>3</td>
</tr>
<tr>
<td>History of Education</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Composition and Literary Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>English 63</td>
<td></td>
</tr>
<tr>
<td>Entomology 1</td>
<td></td>
</tr>
<tr>
<td>French 3</td>
<td></td>
</tr>
<tr>
<td>German 3</td>
<td></td>
</tr>
<tr>
<td>History 3</td>
<td></td>
</tr>
<tr>
<td>Home Economics 7</td>
<td></td>
</tr>
<tr>
<td>Mathematics 55</td>
<td></td>
</tr>
<tr>
<td>Military Science 3</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 3</td>
<td></td>
</tr>
<tr>
<td>Physics 51</td>
<td></td>
</tr>
<tr>
<td>Physics 53</td>
<td></td>
</tr>
<tr>
<td>Physics 59</td>
<td></td>
</tr>
<tr>
<td>Sociology 51</td>
<td></td>
</tr>
<tr>
<td>Spanish 1</td>
<td></td>
</tr>
<tr>
<td>Spanish 3</td>
<td></td>
</tr>
<tr>
<td>Zoology 51</td>
<td></td>
</tr>
<tr>
<td>Zoology 53</td>
<td></td>
</tr>
<tr>
<td>Writing for Publication</td>
<td>3</td>
</tr>
<tr>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>French Prose</td>
<td>3</td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>European History, 1715-1815</td>
<td>3</td>
</tr>
<tr>
<td>Foods and Principles of Cooking</td>
<td>3</td>
</tr>
<tr>
<td>Calculus</td>
<td>5</td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Mechanics and Heat</td>
<td>2</td>
</tr>
<tr>
<td>Physical Theory and Practice</td>
<td>6</td>
</tr>
<tr>
<td>Elementary Optics</td>
<td>2</td>
</tr>
<tr>
<td>Primitive Man and Social Origins</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Spanish</td>
<td>3</td>
</tr>
<tr>
<td>Spanish Prose</td>
<td>3</td>
</tr>
<tr>
<td>General Zoology</td>
<td>3</td>
</tr>
<tr>
<td>Faunal Zoology (Invertebrate)</td>
<td>3</td>
</tr>
</tbody>
</table>

## Sophomore Year, Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 52</td>
<td></td>
</tr>
<tr>
<td>Chemistry 68</td>
<td></td>
</tr>
<tr>
<td>Drawing 64a</td>
<td></td>
</tr>
<tr>
<td>Drawing 70</td>
<td></td>
</tr>
<tr>
<td>Drill 4</td>
<td></td>
</tr>
<tr>
<td>Economics 2</td>
<td></td>
</tr>
<tr>
<td>English 54</td>
<td></td>
</tr>
<tr>
<td>English 56</td>
<td></td>
</tr>
<tr>
<td>English 58</td>
<td></td>
</tr>
<tr>
<td>Entomology 2</td>
<td></td>
</tr>
<tr>
<td>Entomology 4</td>
<td></td>
</tr>
<tr>
<td>French 4</td>
<td></td>
</tr>
<tr>
<td>German 4</td>
<td></td>
</tr>
<tr>
<td>History 4</td>
<td></td>
</tr>
<tr>
<td>Home Economics 6</td>
<td></td>
</tr>
<tr>
<td>Home Economics 8</td>
<td></td>
</tr>
<tr>
<td>Mathematics 56</td>
<td></td>
</tr>
<tr>
<td>Military Science 4</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 4</td>
<td></td>
</tr>
<tr>
<td>Physics 52</td>
<td></td>
</tr>
<tr>
<td>Physics 54</td>
<td></td>
</tr>
<tr>
<td>Physics 58</td>
<td></td>
</tr>
<tr>
<td>Psychology 52</td>
<td></td>
</tr>
<tr>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Free-hand Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Color and Design</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Commercial Geography</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>Elizabethan Drama</td>
<td>3</td>
</tr>
<tr>
<td>Applied Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Household Insects</td>
<td>2</td>
</tr>
<tr>
<td>French Prose</td>
<td>3</td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>European History since 1815</td>
<td>3</td>
</tr>
<tr>
<td>Textiles</td>
<td>2</td>
</tr>
<tr>
<td>Foods and Principles of Cooking</td>
<td>4</td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Magnetism and Electricity</td>
<td>2</td>
</tr>
<tr>
<td>Physical Theory and Practice</td>
<td>6</td>
</tr>
<tr>
<td>Elementary Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>
FOUR-YEAR COURSES.

Christopher's Yale Study Schedule

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish 2</td>
<td>3</td>
</tr>
<tr>
<td>Spanish 4</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 52</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 54</td>
<td>3</td>
</tr>
</tbody>
</table>

JUNIOR YEAR, FIRST SEMESTER.

All elective except Drill and Physical Culture.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 53</td>
<td>3</td>
</tr>
<tr>
<td>Botany 55</td>
<td>3</td>
</tr>
<tr>
<td>Botany 57</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 65</td>
<td>3</td>
</tr>
<tr>
<td>Dairying 51</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 63a</td>
<td>2</td>
</tr>
<tr>
<td>Drill 5</td>
<td>1</td>
</tr>
<tr>
<td>Economics 5</td>
<td>3</td>
</tr>
<tr>
<td>Economics 9</td>
<td>3</td>
</tr>
<tr>
<td>Economics 13</td>
<td>3</td>
</tr>
<tr>
<td>English 53</td>
<td>3</td>
</tr>
<tr>
<td>English 55 or English 57</td>
<td>3</td>
</tr>
<tr>
<td>English 61</td>
<td>3</td>
</tr>
<tr>
<td>English 63</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 1</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 3</td>
<td>2</td>
</tr>
<tr>
<td>Entomology 5</td>
<td>2</td>
</tr>
<tr>
<td>Forestry 51</td>
<td>3</td>
</tr>
<tr>
<td>French 5 or French 7</td>
<td>3</td>
</tr>
<tr>
<td>Geology 51</td>
<td>3</td>
</tr>
<tr>
<td>German 5 or</td>
<td>3</td>
</tr>
<tr>
<td>German 7 or</td>
<td>3</td>
</tr>
<tr>
<td>German 13</td>
<td>3</td>
</tr>
<tr>
<td>German 9 or</td>
<td>3</td>
</tr>
<tr>
<td>German 11</td>
<td>3</td>
</tr>
<tr>
<td>History 5</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 11</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 13</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 57 or</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 59</td>
<td>2</td>
</tr>
<tr>
<td>Military Science 5</td>
<td>1</td>
</tr>
</tbody>
</table>

Field Engineering and Hasty Intrenching.
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Culture 5</td>
<td>5</td>
</tr>
<tr>
<td>Physics 55</td>
<td></td>
</tr>
<tr>
<td>Political Science 3</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 53</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 53</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 55</td>
<td>3</td>
</tr>
<tr>
<td>Spanish 1</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 59</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 61</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 65</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 67</td>
<td>3</td>
</tr>
</tbody>
</table>

**JUNIOR YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 54</td>
<td></td>
</tr>
<tr>
<td>Botany 56</td>
<td></td>
</tr>
<tr>
<td>Chemistry 68</td>
<td></td>
</tr>
<tr>
<td>Drill 6</td>
<td></td>
</tr>
<tr>
<td>Economics 4 or 6</td>
<td>3</td>
</tr>
<tr>
<td>Economics 8</td>
<td>3</td>
</tr>
<tr>
<td>Economics 14</td>
<td>3</td>
</tr>
<tr>
<td>Education 4</td>
<td>2</td>
</tr>
<tr>
<td>English 54</td>
<td>3</td>
</tr>
<tr>
<td>English 58</td>
<td>3</td>
</tr>
<tr>
<td>English 60</td>
<td>4</td>
</tr>
<tr>
<td>English 62</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 4</td>
<td>2</td>
</tr>
<tr>
<td>Entomology 6</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 52</td>
<td></td>
</tr>
<tr>
<td>French 6 or 8</td>
<td>3</td>
</tr>
<tr>
<td>German 6 or 8</td>
<td>3</td>
</tr>
<tr>
<td>German 14</td>
<td>3</td>
</tr>
<tr>
<td>German 10 or 12</td>
<td>3</td>
</tr>
<tr>
<td>History 6</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 10</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 12</td>
<td>3</td>
</tr>
</tbody>
</table>
FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 58 or 60</td>
<td></td>
</tr>
<tr>
<td>Military Science 6</td>
<td></td>
</tr>
<tr>
<td>Mineralogy 54</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 6</td>
<td></td>
</tr>
<tr>
<td>Physics 56</td>
<td></td>
</tr>
<tr>
<td>Political Science 2</td>
<td></td>
</tr>
<tr>
<td>Psychology 52</td>
<td></td>
</tr>
<tr>
<td>Sociology 52</td>
<td></td>
</tr>
<tr>
<td>Spanish 2</td>
<td></td>
</tr>
<tr>
<td>Zoology 54</td>
<td></td>
</tr>
<tr>
<td>Zoology 60</td>
<td></td>
</tr>
<tr>
<td>Zoology 66</td>
<td></td>
</tr>
<tr>
<td>Advanced Calculus</td>
<td>2</td>
</tr>
<tr>
<td>History of Mathematics</td>
<td></td>
</tr>
<tr>
<td>Military Map Reading and Sketching</td>
<td>1</td>
</tr>
<tr>
<td>Mineralogy</td>
<td>2</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Mathematical Physics and Practice</td>
<td>6</td>
</tr>
<tr>
<td>Laws of Business</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Social Pathology and Modern Philanthropy</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Spanish</td>
<td>3</td>
</tr>
<tr>
<td>Faunal Zoology</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>Comparative Anatomy of the Vertebrates</td>
<td>3</td>
</tr>
</tbody>
</table>

SENIOR YEAR, FIRST SEMESTER.

All elective.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 53</td>
<td></td>
</tr>
<tr>
<td>Botany 55</td>
<td></td>
</tr>
<tr>
<td>Botany 57</td>
<td></td>
</tr>
<tr>
<td>Chemistry 71</td>
<td></td>
</tr>
<tr>
<td>Dairying 51</td>
<td></td>
</tr>
<tr>
<td>Drill 7</td>
<td></td>
</tr>
<tr>
<td>Economics 5</td>
<td></td>
</tr>
<tr>
<td>Economics 9</td>
<td></td>
</tr>
<tr>
<td>Economics 13</td>
<td></td>
</tr>
<tr>
<td>Education 5</td>
<td></td>
</tr>
<tr>
<td>Education 7</td>
<td></td>
</tr>
<tr>
<td>Education 9</td>
<td></td>
</tr>
<tr>
<td>English 55</td>
<td></td>
</tr>
<tr>
<td>English 57</td>
<td></td>
</tr>
<tr>
<td>English 59</td>
<td></td>
</tr>
<tr>
<td>English 61</td>
<td></td>
</tr>
<tr>
<td>Entomology 1</td>
<td></td>
</tr>
<tr>
<td>Entomology 3</td>
<td></td>
</tr>
<tr>
<td>Entomology 5</td>
<td></td>
</tr>
<tr>
<td>French 5 or 7</td>
<td></td>
</tr>
<tr>
<td>Geology 51</td>
<td></td>
</tr>
<tr>
<td>Plant Physiology</td>
<td>3</td>
</tr>
<tr>
<td>General Bacteriology</td>
<td>3</td>
</tr>
<tr>
<td>Plant Pathology</td>
<td>3</td>
</tr>
<tr>
<td>Organic Chemical Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Domestic Dairying</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Labor Problems</td>
<td>3</td>
</tr>
<tr>
<td>Corporation Finance</td>
<td>3</td>
</tr>
<tr>
<td>Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Education</td>
<td>3</td>
</tr>
<tr>
<td>Administration and Supervision</td>
<td>2</td>
</tr>
<tr>
<td>English Novel</td>
<td>3</td>
</tr>
<tr>
<td>Modern English Poetry</td>
<td>3</td>
</tr>
<tr>
<td>Chaucer</td>
<td>3</td>
</tr>
<tr>
<td>Modern English Prose</td>
<td>3</td>
</tr>
<tr>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Insects of Domestic Animals</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>French Literature and Composition</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Geology</td>
<td>3</td>
</tr>
</tbody>
</table>
German 5 or German 7 or German 13 German 9 or German 11 History 7

**Home Economics 19**
**Mathematics 57 or Mathematics 59**
**Meteorology 1**
**Military Science 7**
**Physical Culture 7**
**Political Science 3**
**Sociology 53**
**Spanish 3**
**Thesis**
**Zoology 55**
**Zoology 69**
**Zoology 71**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goethe</td>
<td>3</td>
</tr>
<tr>
<td>Schiller</td>
<td></td>
</tr>
<tr>
<td>Sudermann</td>
<td></td>
</tr>
<tr>
<td>German Composition and Conversation</td>
<td>3</td>
</tr>
<tr>
<td>Constitutional and Political History of U. S. since 1860</td>
<td>3</td>
</tr>
<tr>
<td>Household Administration</td>
<td>3</td>
</tr>
<tr>
<td>Differential Equations</td>
<td>2</td>
</tr>
<tr>
<td>Theory of Equations</td>
<td></td>
</tr>
<tr>
<td>Meteorology</td>
<td>2</td>
</tr>
<tr>
<td>Army Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>American Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>Mental Defectives</td>
<td>2</td>
</tr>
<tr>
<td>Spanish Prose</td>
<td></td>
</tr>
<tr>
<td>Systematic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Zoology</td>
<td>3</td>
</tr>
<tr>
<td>Vocational Zoology</td>
<td></td>
</tr>
</tbody>
</table>

**SENIOR YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy</td>
<td>2</td>
</tr>
<tr>
<td>Botany 54</td>
<td>2</td>
</tr>
<tr>
<td>Botany 56</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 76</td>
<td>2</td>
</tr>
<tr>
<td>Drill 8</td>
<td>1</td>
</tr>
<tr>
<td>Economics 4 or Economics 6</td>
<td>3</td>
</tr>
<tr>
<td>Economics 8</td>
<td>3</td>
</tr>
<tr>
<td>Economics 14</td>
<td>3</td>
</tr>
<tr>
<td>Education 6</td>
<td>2</td>
</tr>
<tr>
<td>English 56</td>
<td>3</td>
</tr>
<tr>
<td>English 58</td>
<td>3</td>
</tr>
<tr>
<td>English 60</td>
<td>3</td>
</tr>
<tr>
<td>English 62</td>
<td>4</td>
</tr>
<tr>
<td>Entomology 2</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 4</td>
<td></td>
</tr>
<tr>
<td>French 6 or</td>
<td>3</td>
</tr>
<tr>
<td>French 8</td>
<td>2</td>
</tr>
<tr>
<td>Geology 52</td>
<td>3</td>
</tr>
<tr>
<td>Astronomy</td>
<td></td>
</tr>
<tr>
<td>Plant Histology</td>
<td>2</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>3</td>
</tr>
<tr>
<td>Physical and Electro Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td></td>
</tr>
<tr>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Public Finance and Taxation</td>
<td></td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>History and Theory of Industrial Education</td>
<td>2</td>
</tr>
<tr>
<td>Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>Elizabethan Drama</td>
<td>3</td>
</tr>
<tr>
<td>American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Shakespeare's Plays</td>
<td>3</td>
</tr>
<tr>
<td>Applied Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Household Insects</td>
<td>2</td>
</tr>
<tr>
<td>French Literature and Composition</td>
<td>3</td>
</tr>
<tr>
<td>Historical Geology</td>
<td>3</td>
</tr>
</tbody>
</table>
FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>German 6 or German 8 or</td>
<td></td>
</tr>
<tr>
<td>German 14</td>
<td></td>
</tr>
<tr>
<td>German 10 or German 12</td>
<td></td>
</tr>
<tr>
<td>Mathematics 58 or Mathematics 60</td>
<td></td>
</tr>
<tr>
<td>Military Science 8</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 8</td>
<td></td>
</tr>
<tr>
<td>Political Science 2</td>
<td></td>
</tr>
<tr>
<td>Sociology 54</td>
<td></td>
</tr>
<tr>
<td>Sociology 56</td>
<td></td>
</tr>
<tr>
<td>Sociology 58</td>
<td></td>
</tr>
<tr>
<td>Spanish 4</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td></td>
</tr>
<tr>
<td>Zoology 56</td>
<td></td>
</tr>
<tr>
<td>Zoology 62</td>
<td></td>
</tr>
<tr>
<td>Zoology 64</td>
<td></td>
</tr>
<tr>
<td>Zoology 68</td>
<td></td>
</tr>
<tr>
<td>Zoology 70</td>
<td></td>
</tr>
<tr>
<td>Zoology 72</td>
<td></td>
</tr>
<tr>
<td>Goethe</td>
<td>3</td>
</tr>
<tr>
<td>Schiller</td>
<td></td>
</tr>
<tr>
<td>Sudermann</td>
<td></td>
</tr>
<tr>
<td>German Composition and Conversaion</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Calculus</td>
<td></td>
</tr>
<tr>
<td>History of Mathematical Science</td>
<td>2</td>
</tr>
<tr>
<td>Army Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Laws of Business</td>
<td>3</td>
</tr>
<tr>
<td>Rural Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Social Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Spanish Prose</td>
<td>3</td>
</tr>
<tr>
<td>Ornithology</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Advanced Neurology</td>
<td>3</td>
</tr>
<tr>
<td>Evolution and Genetics</td>
<td>3</td>
</tr>
<tr>
<td>Insect Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Zoology</td>
<td>3</td>
</tr>
<tr>
<td>Vocational Zoology</td>
<td>3</td>
</tr>
</tbody>
</table>

Home Economics Course.

FRESHMAN YEAR, FIRST SEMESTER.

Required Subjects:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 67</td>
<td></td>
</tr>
<tr>
<td>Chemistry 55</td>
<td></td>
</tr>
<tr>
<td>English 51</td>
<td></td>
</tr>
<tr>
<td>Houseplanning</td>
<td>2</td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td>2</td>
</tr>
<tr>
<td>Elementary Cooking</td>
<td>2</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>General Zoology</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective Subjects:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>French 1</td>
<td>3</td>
</tr>
<tr>
<td>German 1</td>
<td>3</td>
</tr>
<tr>
<td>History 1</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 51a</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 51b</td>
<td>4</td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td>3</td>
</tr>
<tr>
<td>European History, 476-1492</td>
<td>3</td>
</tr>
<tr>
<td>Algebra and Trigonometry</td>
<td>4</td>
</tr>
<tr>
<td>Trigonometry and Analytic Geometry</td>
<td>4</td>
</tr>
</tbody>
</table>

*Other subjects may be offered for the elective requirement. The student has a choice of a wide range from all departments of the college.
**FRESHMAN YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Required Subjects:</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Elective Subjects:</em></td>
<td></td>
</tr>
<tr>
<td><em>Special Subjects:</em></td>
<td></td>
</tr>
<tr>
<td><em>Required Subjects:</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 56</td>
<td></td>
</tr>
<tr>
<td>Drawing 68</td>
<td></td>
</tr>
<tr>
<td>English 52</td>
<td></td>
</tr>
<tr>
<td>Home Economics 2</td>
<td></td>
</tr>
<tr>
<td>Home Economics 4</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 2</td>
<td></td>
</tr>
<tr>
<td>Zoology 58</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Elective Subjects:</em></td>
<td></td>
</tr>
<tr>
<td>English 54</td>
<td></td>
</tr>
<tr>
<td>French 2</td>
<td></td>
</tr>
<tr>
<td>German 2</td>
<td></td>
</tr>
<tr>
<td>History 2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Subjects:</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>House Structure</td>
<td>2</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>The House</td>
<td>2</td>
</tr>
<tr>
<td>Plain Sewing</td>
<td>1</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Human Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td>3</td>
</tr>
<tr>
<td>European History 1492-1715</td>
<td>3</td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Required Subjects:</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Elective Subjects:</em></td>
<td></td>
</tr>
<tr>
<td><em>Required Subjects:</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 57</td>
<td></td>
</tr>
<tr>
<td>Drawing 69</td>
<td></td>
</tr>
<tr>
<td>Home Economics 7</td>
<td></td>
</tr>
<tr>
<td>Physical Culture 3</td>
<td></td>
</tr>
<tr>
<td>Zoology 59</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Freehand Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Foods and Principles of Cooking</td>
<td>3</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>1</td>
</tr>
<tr>
<td>Hygiene and Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Composition and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>History of Education</td>
<td>2</td>
</tr>
<tr>
<td>French Prose</td>
<td>3</td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>European History 1715-1815</td>
<td>3</td>
</tr>
<tr>
<td>Household Physics</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>2</td>
</tr>
<tr>
<td>Foods and Principles of Cooking</td>
<td>3</td>
</tr>
<tr>
<td>Color and Design</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Other subjects may be offered for the elective requirement. The student has a choice of a wide range from all departments of the college.</td>
<td></td>
</tr>
<tr>
<td>†Should be elected by students not offering physics for entrance.</td>
<td></td>
</tr>
</tbody>
</table>
FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Culture 4</td>
<td>1</td>
</tr>
<tr>
<td>Psychology 52</td>
<td>3</td>
</tr>
<tr>
<td>Elective Subjects:</td>
<td></td>
</tr>
<tr>
<td>Botany 52</td>
<td>3</td>
</tr>
<tr>
<td>English 56</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 4</td>
<td>2</td>
</tr>
<tr>
<td>History 4</td>
<td>3</td>
</tr>
<tr>
<td>French 4</td>
<td>3</td>
</tr>
<tr>
<td>German 4</td>
<td>3</td>
</tr>
</tbody>
</table>

JUNIOR YEAR, FIRST SEMESTER.

| Required Subjects:         |              |
| Botany 55                  | 3            |
| Home Economics 11          | 3            |
| Home Economics 13          | 2            |
| Physical Culture 5         | 1            |
| Economics 1                | 3            |
| *Elective Subjects:        |              |
| Psychology 53              | 3            |
| Dairying 51                | 3            |
| History 5                  | 3            |
| English 57                 | 3            |

| Required Subjects:         |              |
| Home Economics 12          | 3            |
| Physical Culture 6         | 1            |
| Home Economics 10          | 3            |
| *Elective Subjects:        |              |
| Education 4                | 2            |
| Home Economics 18          | 3            |
| Home Economics 14          | 3            |
| History 6                  | 3            |
| English 60                 | 4            |

JUNIOR YEAR, SECOND SEMESTER.

| Required Subjects:         |              |
| Home Economics 12          | 3            |
| Physical Culture 6         | 1            |
| Home Economics 10          | 3            |
| *Elective Subjects:        |              |
| Education 4                | 2            |
| Home Economics 18          | 3            |
| Home Economics 14          | 3            |
| History 6                  | 3            |
| English 60                 | 4            |

SENIOR YEAR, FIRST SEMESTER.

| Required Subjects:         |              |
| Sociology 51               | 3            |
| Home Economics 19          | 3            |

*Other subjects may be offered for the elective requirement.
NEW HAMPSHIRE COLLEGE.

*Elective Subjects:  
Education 5  
Psychology 55  
Home Economics 21  
History 7  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hours</td>
<td>10</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Original Problems</td>
<td>3</td>
</tr>
<tr>
<td>Constitutional and Political History to U. S. to 1860</td>
<td>3</td>
</tr>
</tbody>
</table>

SENIOR YEAR, SECOND SEMESTER.

Required Subjects:  
Zoology 64  
Sociology 52  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hours</td>
<td>10</td>
</tr>
<tr>
<td>Evolution and Genetics</td>
<td>3</td>
</tr>
<tr>
<td>Social Pathology and Modern Philanthropy</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective Subjects:  
Home Economics 22  
Home Economics 24  
Education 6  
Sociology 54  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Problems</td>
<td>3</td>
</tr>
<tr>
<td>Teachers' course</td>
<td>3</td>
</tr>
<tr>
<td>History and Theory of Industrial Education</td>
<td>2</td>
</tr>
<tr>
<td>Rural Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Mechanic Arts Course for Teachers.

FRESHMAN YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 51</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 51</td>
<td>3</td>
</tr>
<tr>
<td>Drill 1</td>
<td>1</td>
</tr>
<tr>
<td>English 51</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 51a or 51b</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 53</td>
<td>2</td>
</tr>
<tr>
<td>Military Science 1</td>
<td>1</td>
</tr>
<tr>
<td>Shop Work 51</td>
<td>2</td>
</tr>
</tbody>
</table>

FRESHMAN YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 52</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 58</td>
<td>3</td>
</tr>
<tr>
<td>Drill 2</td>
<td>1</td>
</tr>
<tr>
<td>English 52</td>
<td>3</td>
</tr>
<tr>
<td>*History 2</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective.
FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Mathematics 52</td>
<td></td>
</tr>
<tr>
<td>Mathematics 54</td>
<td></td>
</tr>
<tr>
<td>Military Science 2</td>
<td></td>
</tr>
<tr>
<td>Shop Work 52</td>
<td></td>
</tr>
<tr>
<td>Analytic Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Surveying</td>
<td>2</td>
</tr>
<tr>
<td>Manual of Guard Duty</td>
<td>1</td>
</tr>
<tr>
<td>Wood Work</td>
<td>2</td>
</tr>
</tbody>
</table>

SOPHOMORE YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 59</td>
<td></td>
</tr>
<tr>
<td>Drill 3</td>
<td></td>
</tr>
<tr>
<td>Economics 1</td>
<td></td>
</tr>
<tr>
<td>English 53</td>
<td></td>
</tr>
<tr>
<td>*German 1</td>
<td></td>
</tr>
<tr>
<td>Military Science 3</td>
<td></td>
</tr>
<tr>
<td>Physics 51</td>
<td></td>
</tr>
<tr>
<td>Shop Work 59</td>
<td></td>
</tr>
<tr>
<td>*Zoology 51</td>
<td></td>
</tr>
<tr>
<td>Introductory Qualitative Analysis</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Elementary Economics</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Composition and Literary Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td>3</td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Mechanics and Heat</td>
<td>2</td>
</tr>
<tr>
<td>Wood Work</td>
<td>3</td>
</tr>
<tr>
<td>General Zoology</td>
<td>3</td>
</tr>
</tbody>
</table>

SOPHOMORE YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 62</td>
<td></td>
</tr>
<tr>
<td>Drill 4</td>
<td></td>
</tr>
<tr>
<td>*English 56</td>
<td></td>
</tr>
<tr>
<td>*German 2</td>
<td></td>
</tr>
<tr>
<td>Military Science 4</td>
<td></td>
</tr>
<tr>
<td>Physics 52</td>
<td></td>
</tr>
<tr>
<td>Physics 58</td>
<td></td>
</tr>
<tr>
<td>Psychology 52</td>
<td></td>
</tr>
<tr>
<td>Shop Work 60</td>
<td></td>
</tr>
<tr>
<td>*Zoology 52</td>
<td></td>
</tr>
<tr>
<td>Machine Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td>3</td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Magnetism and Electricity</td>
<td>2</td>
</tr>
<tr>
<td>Elementary Physics and Practice</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Wood Work</td>
<td>2</td>
</tr>
<tr>
<td>General Zoology</td>
<td>3</td>
</tr>
</tbody>
</table>

JUNIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 65</td>
<td></td>
</tr>
<tr>
<td>Drill 5</td>
<td></td>
</tr>
<tr>
<td>Education 5</td>
<td></td>
</tr>
<tr>
<td>*English 55 or 57</td>
<td></td>
</tr>
<tr>
<td>Forestry 53</td>
<td></td>
</tr>
<tr>
<td>*Geology 51</td>
<td></td>
</tr>
<tr>
<td>*German 3</td>
<td></td>
</tr>
<tr>
<td>*History 1</td>
<td></td>
</tr>
<tr>
<td>Architectural Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>3</td>
</tr>
<tr>
<td>The English Novel</td>
<td>3</td>
</tr>
<tr>
<td>Modern English Poetry</td>
<td>4</td>
</tr>
<tr>
<td>Dendrology</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Geology</td>
<td>3</td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>European History, 476–1492</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Military Science 5</td>
<td>Field Engineering and Hasty In-trenching</td>
</tr>
<tr>
<td>*Sociology 51</td>
<td>Primitive Man and Social Origins</td>
</tr>
<tr>
<td>Shop Work 65</td>
<td>Wood Work</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 66</td>
<td>Architectural Drawing</td>
</tr>
<tr>
<td>Drill 6</td>
<td>Military Drill</td>
</tr>
<tr>
<td>*Economics 2</td>
<td>Commercial Geography</td>
</tr>
<tr>
<td>*Economics 4 or *Economics 6</td>
<td>Money and Banking</td>
</tr>
<tr>
<td>Education 4</td>
<td>Public Finance and Taxation</td>
</tr>
<tr>
<td>*English 60</td>
<td>School Hygiene</td>
</tr>
<tr>
<td>*Forestry 60</td>
<td>American Literature</td>
</tr>
<tr>
<td>*German 4</td>
<td>Forest Utilization</td>
</tr>
<tr>
<td>*History 2</td>
<td>German Prose</td>
</tr>
<tr>
<td>*Military Science 6</td>
<td>European History, 1492-1715</td>
</tr>
<tr>
<td>*Political Science 2</td>
<td>Military Map Reading and Sketching</td>
</tr>
<tr>
<td>Shop Work 66</td>
<td>Laws of Business</td>
</tr>
<tr>
<td></td>
<td>Forge Work</td>
</tr>
</tbody>
</table>

### SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 9</td>
<td>Industrial Electricity</td>
</tr>
<tr>
<td>*English 55 or *English 57</td>
<td>The English Novel</td>
</tr>
<tr>
<td>*English 61</td>
<td>Modern English Poetry</td>
</tr>
<tr>
<td>*History 5</td>
<td>English Prose</td>
</tr>
<tr>
<td>*Political Science 3</td>
<td>American History to 1801</td>
</tr>
<tr>
<td>Psychology 53</td>
<td>American Constitutional Law</td>
</tr>
<tr>
<td>Shop Work 71</td>
<td>Adolescent Psychology</td>
</tr>
</tbody>
</table>

### SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing 72</td>
<td>Practical Mathematics</td>
</tr>
<tr>
<td>Education 6</td>
<td>History and Theory of Industrial Education</td>
</tr>
<tr>
<td>*English 60</td>
<td>American Literature</td>
</tr>
<tr>
<td>*Forestry 60</td>
<td>Forest Utilization</td>
</tr>
<tr>
<td>*History 6</td>
<td>American History, 1801-1861</td>
</tr>
<tr>
<td>Mechanical Engineering 72</td>
<td>Manual Training and Exercises in Practical Teaching</td>
</tr>
<tr>
<td>*Political Science 2</td>
<td>Laws of Business</td>
</tr>
</tbody>
</table>

* Elective.
FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop Work 72</td>
<td></td>
</tr>
<tr>
<td>*Sociology 52</td>
<td></td>
</tr>
<tr>
<td>*Sociology 54</td>
<td></td>
</tr>
<tr>
<td>Machine Work</td>
<td>3</td>
</tr>
<tr>
<td>Social Pathology and Modern Philanthropy</td>
<td>3</td>
</tr>
<tr>
<td>Rural Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

ENGINEERING DIVISION.

Electrical and Mechanical Engineering Courses.

FRESHMAN YEAR, FIRST SEMESTER.

E E. 7 and M. E. 27 are elective without credit.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 51</td>
<td></td>
</tr>
<tr>
<td>Drawing 51</td>
<td></td>
</tr>
<tr>
<td>Drill 1</td>
<td></td>
</tr>
<tr>
<td>*Electrical Engineering 7</td>
<td></td>
</tr>
<tr>
<td>English 51</td>
<td></td>
</tr>
<tr>
<td>Mathematics 51b</td>
<td></td>
</tr>
<tr>
<td>Mathematics 53</td>
<td></td>
</tr>
<tr>
<td>*Mechanical Engineering 51</td>
<td></td>
</tr>
<tr>
<td>Military Science 1</td>
<td></td>
</tr>
<tr>
<td>Shop Work 51</td>
<td></td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td>Lectures and Recitations</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>History of Electrical Engineering</td>
<td>0</td>
</tr>
<tr>
<td>Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>Trigonometry and Analytical Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Solid Geometry</td>
<td>2</td>
</tr>
<tr>
<td>History of Mechanical Engineering</td>
<td></td>
</tr>
<tr>
<td>Infantry Drill Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Wood Work</td>
<td>2</td>
</tr>
</tbody>
</table>

FRESHMAN YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 52</td>
<td></td>
</tr>
<tr>
<td>Chemistry 54</td>
<td></td>
</tr>
<tr>
<td>Drawing 56</td>
<td></td>
</tr>
<tr>
<td>Drill 2</td>
<td></td>
</tr>
<tr>
<td>English 52</td>
<td></td>
</tr>
<tr>
<td>Mathematics 52</td>
<td></td>
</tr>
<tr>
<td>Military Science 2</td>
<td></td>
</tr>
<tr>
<td>*Elective.</td>
<td></td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td>Lectures and Recitations</td>
<td>3</td>
</tr>
<tr>
<td>Qualitative Analysis</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td></td>
</tr>
<tr>
<td>Recitation</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>Analytical Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Manual of Guard Duty</td>
<td>1</td>
</tr>
</tbody>
</table>
### Sophomore Year, First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drawing 57</strong></td>
<td>57</td>
</tr>
<tr>
<td><strong>Drill 3</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Mathematics 55</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Military Science 3</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Physics 53</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Shop 57</strong></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine Drawing Laboratory</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Military Drill</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Calculus</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Field Service Regulations</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Physical Theory and Practice</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Laboratory</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Forging</strong></td>
<td>2</td>
</tr>
</tbody>
</table>

### Sophomore Year, Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drill 4</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 74</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Mathematics 56</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 52</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Military Science 4</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Physics 54</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Shop Work 62</strong></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Military Drill</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Kinematics of Machinery</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Calculus</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Mechanics of Engineering</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Field Service Regulations</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Physical Theory and Practice</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Laboratory</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Machine Work</strong></td>
<td>2</td>
</tr>
</tbody>
</table>

### Junior Year, First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drill 5</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Electrical Engineering 1</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 69</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Shop 63</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 59</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 77</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Mechanical Engineering 63</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Military Drill</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Dynamo Electric Machinery</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Laboratory</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Mechanics of Engineering</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Recitations</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Machine Work</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Mechanical Laboratory</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Recitation</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Valve Gear and Boiler Design</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Laboratory</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Materials of Construction</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

* Elective.
FOUR-YEAR COURSES.

JUNIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill 6</td>
<td>1</td>
</tr>
<tr>
<td>Electrical Engineering 2</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical Engineering 64</td>
<td>2</td>
</tr>
<tr>
<td>Mechanical Engineering 60</td>
<td>1</td>
</tr>
<tr>
<td>Shop 64</td>
<td>2</td>
</tr>
<tr>
<td>Mechanical Engineering 58</td>
<td>3</td>
</tr>
</tbody>
</table>

Military Drill ........................................ 1
Dynamo Electric Machinery
Lectures and Recitations .................. 3
Laboratory ........................................ 1
Machine Design
Lectures and Recitations .................. 2
Laboratory ........................................ 2
Mechanical Laboratory
Recitation ........................................ 1
Laboratory ........................................ 1
Manufacturing ........................................ 2
Hydraulics
Recitations ........................................ 3
Thermodynamics
Recitations ........................................ 3

Electrical Engineering Course.

SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 1</td>
<td>3</td>
</tr>
<tr>
<td>*Economics 13</td>
<td>3</td>
</tr>
<tr>
<td>*Electrical Engineering 3</td>
<td>1</td>
</tr>
<tr>
<td>Electrical Engineering 11</td>
<td>4</td>
</tr>
<tr>
<td>Electrical Engineering 15</td>
<td>1</td>
</tr>
<tr>
<td>*Electrical Engineering 27</td>
<td>1</td>
</tr>
<tr>
<td>Mechanical Engineering 73</td>
<td>4</td>
</tr>
<tr>
<td>Mechanical Engineering 65</td>
<td>1</td>
</tr>
<tr>
<td>*Mathematics 57 or *Mathematics 59</td>
<td>2</td>
</tr>
</tbody>
</table>

Elementary Economics ...................... 3
Accounting ........................................ 3
Telegraph and Telephone ................... 1
Electrical Engineering Practice
Lectures and Recitations ................ 4
Electrical Laboratory
Writing Reports ................................ 1
Laboratory ........................................ 2
Contracts and Specifications ............. 1
Power Plant Engineering
Lectures and Recitations ................ 4
Mechanical Laboratory
Recitation ........................................ 1
Laboratory ........................................ 1
Differential Equations { ................ 2
Theory of Equations .........................

SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Economics 4 or *Economics 6 or *Economics 14</td>
<td>3</td>
</tr>
<tr>
<td>*Economics 14</td>
<td>3</td>
</tr>
</tbody>
</table>

Money and Banking
Public Finance and Taxation {          3
Cost Accounting                      }

* Elective.
<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 12</td>
<td>12</td>
</tr>
<tr>
<td>Electrical Engineering 14</td>
<td>14</td>
</tr>
<tr>
<td>Electrical Engineering 16</td>
<td>16</td>
</tr>
<tr>
<td>Electrical Engineering 24</td>
<td>24</td>
</tr>
<tr>
<td>Electrical Engineering 26</td>
<td>26</td>
</tr>
<tr>
<td>Mathematics 64</td>
<td>64</td>
</tr>
<tr>
<td>*English 56</td>
<td>56</td>
</tr>
<tr>
<td>*Mathematics 58 or 60</td>
<td></td>
</tr>
<tr>
<td>*Psychology 52</td>
<td>52</td>
</tr>
<tr>
<td>*Sociology 52</td>
<td>52</td>
</tr>
</tbody>
</table>

### Mechanical Engineering Course

#### SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 1</td>
<td>1</td>
</tr>
<tr>
<td>*Economics 13</td>
<td>3</td>
</tr>
<tr>
<td>*Electrical Engineering 3</td>
<td>3</td>
</tr>
<tr>
<td>*Electrical Engineering 27</td>
<td>3</td>
</tr>
<tr>
<td>*Mathematics 57 or 69</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering 73</td>
<td>73</td>
</tr>
<tr>
<td>Mechanical Engineering 65</td>
<td>65</td>
</tr>
<tr>
<td>Mechanical Engineering 79</td>
<td>79</td>
</tr>
<tr>
<td>Shop 69</td>
<td>69</td>
</tr>
</tbody>
</table>

#### SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Economics 4 or 6 or 14</td>
<td></td>
</tr>
<tr>
<td>*Elective.</td>
<td></td>
</tr>
<tr>
<td>Money and Banking</td>
<td>4</td>
</tr>
<tr>
<td>Public Finance and Taxation</td>
<td>3</td>
</tr>
<tr>
<td>Cost Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>
## FOUR-YEAR COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering Practice</td>
<td>4</td>
</tr>
<tr>
<td>Lectures and Recitations</td>
<td></td>
</tr>
<tr>
<td>Argumentation and Debating</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Calculus</td>
<td></td>
</tr>
<tr>
<td>History of Mathematical Science</td>
<td>2</td>
</tr>
<tr>
<td>Mechanical Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Design</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Social Pathology</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Lectures and Recitations</td>
<td></td>
</tr>
<tr>
<td>Surveying</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

### Chemical Engineering Course.

#### FRESHMAN YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 51</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 51</td>
<td>2</td>
</tr>
<tr>
<td>Drill 1</td>
<td>1</td>
</tr>
<tr>
<td>English 51</td>
<td>1</td>
</tr>
<tr>
<td>French 1 or German 1</td>
<td></td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td></td>
</tr>
<tr>
<td>Mathematics 51b</td>
<td>4</td>
</tr>
<tr>
<td>Inorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td></td>
</tr>
<tr>
<td>Military Drill</td>
<td></td>
</tr>
<tr>
<td>English Composition and Rhetoric</td>
<td></td>
</tr>
<tr>
<td>Trigonometry and Analytic Geometry</td>
<td></td>
</tr>
<tr>
<td>Infantry Drill Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Wood Work</td>
<td>1</td>
</tr>
</tbody>
</table>

#### FRESHMAN YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 52</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 54</td>
<td>3</td>
</tr>
<tr>
<td>Drill 2</td>
<td>1</td>
</tr>
<tr>
<td>English 52</td>
<td>1</td>
</tr>
<tr>
<td>French 2 or German 2</td>
<td></td>
</tr>
<tr>
<td>Elementary French</td>
<td>3</td>
</tr>
<tr>
<td>Elementary German</td>
<td></td>
</tr>
<tr>
<td>Mathematics 52</td>
<td>4</td>
</tr>
<tr>
<td>Analytical Geometry</td>
<td></td>
</tr>
<tr>
<td>Military Science 2</td>
<td>4</td>
</tr>
<tr>
<td>Manual of Guard Duty</td>
<td>1</td>
</tr>
</tbody>
</table>

*Elective.*
### Sophomore Year, First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 61</td>
<td></td>
</tr>
<tr>
<td>Qualitative Analysis</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry 63</td>
<td></td>
</tr>
<tr>
<td>Inorganic Preparations</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 65</td>
<td></td>
</tr>
<tr>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 67a</td>
<td></td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>Drill 3</td>
<td></td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>German 3</td>
<td></td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 55</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td>5</td>
</tr>
<tr>
<td>Military Science 3</td>
<td></td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
</tbody>
</table>

### Sophomore Year, Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 66</td>
<td></td>
</tr>
<tr>
<td>Quantitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 68a</td>
<td></td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Drill 4</td>
<td></td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Geology 54</td>
<td></td>
</tr>
<tr>
<td>Mineralogy</td>
<td>2</td>
</tr>
<tr>
<td>German 16</td>
<td></td>
</tr>
<tr>
<td>German Prose</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 56</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Military Science 4</td>
<td></td>
</tr>
<tr>
<td>Field Service Regulations</td>
<td>1</td>
</tr>
</tbody>
</table>

### Junior Year, First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 71</td>
<td></td>
</tr>
<tr>
<td>Organic Chemical Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 73</td>
<td></td>
</tr>
<tr>
<td>Advanced Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 75 or</td>
<td></td>
</tr>
<tr>
<td>Physical Chemistry</td>
<td></td>
</tr>
<tr>
<td>Chemistry 77</td>
<td></td>
</tr>
<tr>
<td>Advanced Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Drill 5</td>
<td></td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>*Military Science 5</td>
<td></td>
</tr>
<tr>
<td>Field Engineering and Hasty Entrenching</td>
<td>1</td>
</tr>
<tr>
<td>Physics 55</td>
<td></td>
</tr>
<tr>
<td>Mathematical Physics and Practice</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

### Junior Year, Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 74</td>
<td></td>
</tr>
<tr>
<td>Advanced Quantitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 76 or</td>
<td></td>
</tr>
<tr>
<td>Physical and ElectroChemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 78</td>
<td></td>
</tr>
<tr>
<td>Industrial Chemistry</td>
<td></td>
</tr>
<tr>
<td>Chemistry 80</td>
<td></td>
</tr>
<tr>
<td>Metallurgy</td>
<td></td>
</tr>
<tr>
<td>Drill 6</td>
<td></td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>*Military Science 6</td>
<td></td>
</tr>
<tr>
<td>Military Map Reading and Sketching</td>
<td>1</td>
</tr>
<tr>
<td>Physics 56</td>
<td></td>
</tr>
<tr>
<td>Mathematical Physics and Practice</td>
<td>6</td>
</tr>
<tr>
<td>Shop Work 68</td>
<td></td>
</tr>
<tr>
<td>Machine Work</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

*Elective.*
FOUR-YEAR COURSES.

SENIOR YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 75 or 77</td>
<td></td>
</tr>
<tr>
<td>Chemistry 79</td>
<td></td>
</tr>
<tr>
<td>Chemistry 83</td>
<td></td>
</tr>
<tr>
<td>*Drill 7</td>
<td></td>
</tr>
<tr>
<td>Economics 1</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering 21</td>
<td></td>
</tr>
<tr>
<td>*Military Science 7</td>
<td></td>
</tr>
<tr>
<td>Chemistry 76 or 78</td>
<td></td>
</tr>
<tr>
<td>Chemistry 80</td>
<td></td>
</tr>
<tr>
<td>Chemistry 84</td>
<td></td>
</tr>
<tr>
<td>*Drill 8</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering 22</td>
<td></td>
</tr>
<tr>
<td>English 56 or 52</td>
<td></td>
</tr>
<tr>
<td>Sociology 52</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering 58</td>
<td></td>
</tr>
<tr>
<td>*Military Science 8</td>
<td></td>
</tr>
</tbody>
</table>

SENIOR YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 76 or 78</td>
<td></td>
</tr>
<tr>
<td>Chemistry 80</td>
<td></td>
</tr>
<tr>
<td>Chemistry 84</td>
<td></td>
</tr>
<tr>
<td>*Drill 8</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering 22</td>
<td></td>
</tr>
<tr>
<td>English 56 or 52</td>
<td></td>
</tr>
<tr>
<td>Sociology 52</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering 58</td>
<td></td>
</tr>
<tr>
<td>*Military Science 8</td>
<td></td>
</tr>
<tr>
<td>Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Inorganic Chemistry</td>
<td></td>
</tr>
<tr>
<td>Assaying</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Quantitative Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Elementary Economics</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Electricity</td>
<td>3</td>
</tr>
<tr>
<td>Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td>Army Regulations</td>
<td>1</td>
</tr>
<tr>
<td>Physical and Electrochemistry</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Chemistry</td>
<td></td>
</tr>
<tr>
<td>Metallurgy</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>7</td>
</tr>
<tr>
<td>Military Drill</td>
<td>1</td>
</tr>
<tr>
<td>Industrial Electricity</td>
<td>3</td>
</tr>
<tr>
<td>Argumentation and Debating</td>
<td>3</td>
</tr>
<tr>
<td>Social Pathology</td>
<td></td>
</tr>
<tr>
<td>Thermodynamics</td>
<td>2</td>
</tr>
<tr>
<td>Army Regulations</td>
<td>1</td>
</tr>
</tbody>
</table>
DESCRIPTION OF STUDIES.

Each department is given in capital letters arranged alphabetically and followed by the professors and instructors connected with the department. The number of each individual subject is followed by the name of the instructor who gives it, and the room and building in which it will meet. Abbreviations for the buildings are as follows: C. H.—Conant Hall; D.H.—DeMeritt Hall; Lib.—Library; M.H.—Morrill Hall; N.H.—Nesmith Hall; T.H.—Thompson Hall.

Following the description of each subject will be found the prerequisites, if any, and the nature and number of the meetings of the class per week. Except in drill and physical culture, the number of hours of credit each subject will count toward graduation will be equal to the number of meetings of the class per week. Two exercises in drill or physical culture per week count for one hour of credit. The following abbreviations tell the nature of the exercise: Lec.—lecture; Rec.—recitation; each of which are one hour in length; and Lab.—laboratory, two and one-half hours long.

An elective subject will be given only when there is a sufficient number of students taking the same.

AGRONOMY.

PROF. TAYLOR, ASST. PROF. PRINCE, MR. YOUNG.

51. Agricultural Engineering. Prof. Taylor. 110 M.H.

Lectures and recitations upon the mapping of farms; fencing; drainage; farm sanitation; tillage and harvesting machinery; concrete construction; silos; farm motors; roads and principles of draft. Practical work in map making, laying out drains, rope splicing, comparing farm machines, etc. For Agricultural Sophomores.

2 Lec., 1 Lab. per week. 1st S.
52. Soils.  Asst. Prof. Prince.  110 M. H.
Text-book and recitations upon the formation, kinds and physical properties of soils; the movements and conservation of soil moisture; the relation of heat and air to soil; the nature and physical effects of tillage and fertilizers; laboratory work and experimentation with soils to show the physical effects of different conditions and texture. For Agricultural Juniors.  
2 Lec., 1 Lab. per week.  2d S.

53. Field Crops.  Prof. Taylor.  110 M.H.
Text-book and recitations upon the history, use, value and methods of culture of our various field crops, including hay and grass, with particular reference to New England conditions. Laboratory practice in judging the different varieties of grains and grasses. For Agricultural Juniors except in Forestry Course.  
2 Lec., 1 Lab. per week.  1st S.

54. Fertilizers.  Mr. Young.  110 M.H.
Lectures, text-book and recitations upon the principles of fertility and plant nutrition. A study of the value and use of plant food materials, including farm manures. For Agricultural Seniors except in Forestry Course.

Prerequisites—Chemistry 51 and 52.  
3 Rec. per week.  2d S.

55. Farm Management.  Prof. Taylor.  110 M.H.
Text-book, lectures and recitations upon the development of farming as a business, types of farming, size of farms, cropping systems, live stock problems, marketing farm products, and choosing and buying a farm. Practical work will be given in laying out farms; studying survey records of individual farms to find the labor income; also analyzing the farm business record to determine the effect of efficiency factors on the profits made. Exercises will be given in farm building arrangements, distribution of labor throughout the year, and taking survey record of the home farm. For Agricultural Seniors, except in Forestry Course.

Prerequisite—Agronomy 51.  
2 Lec., 1 Lab. per week.  1st S.

56. Special Agronomy.  Prof. Taylor.  110 M.H.
Advanced work for students interested in some particular line. No class exercises. The hours and kind of work must be arranged with the department before the subject is elected. For Agricultural Seniors.

Prerequisite—All preceding subjects in Agronomy except 54.

Three credit hours.  2d S.

57. Agricultural Seminar.  Prof. Taylor.  110 M.H.
Library and reference work, the preparation of bibliographies, a study of the work and history of agricultural colleges and experiment stations. Lectures upon the history of agriculture. Elective for Agricultural Seniors.  
2 Lec. per week.  1st S.
58. Farm Cost Accounting.                    Mr. Young. 110 M.H.

Lectures on the principles of cost accounting as applied to farming, including business forms, and certain legal aspects of farming as a business. Laboratory exercises include the study of inventories, accounts with single enterprises and sets of complete cost accounts taken from actual farms.

For Agricultural Juniors. 1 Lec., 1 Lab. per week. 2d S.

ANIMAL HUSBANDRY.

PROF. ECKMAN, ASST. PROF. MITCHELL, MR. FAWCETT.

51. Types and Breeds of Live Stock.        Mr. Fawcett. 105 M.H.

A study of the different breeds of horses, cattle, sheep, and swine in respect to their origin, history, development, characteristics, and adaptability to different conditions of climate and soil. One afternoon each week is devoted to judging the different breeds. For Agricultural Sophomores.

3 Rec., 1 Lab. per week 1st S.

52. Advanced Stock Judging.                Mr. Fawcett. 105 M.H.

The work consists of a study of the principles and practice of judging live stock and market classes and grades. Students intending to compete for the live stock judging team should elect this subject. For laboratory work trips are taken to some of the best herds in New England. Elective for Agricultural Sophomores.

Prerequisite—Animal Husbandry 51. 2 Rec. per week 2d S.

54. Feeds and Feeding.                     Mr. Fawcett. 105 M.H.

A study of the laws of nutrition, the character and composition of feed stuffs and methods of feeding different kinds of farm animals. For the purpose of familiarizing the students with the various feed stuffs, numerous samples of grains and by-products are used. Practice is given in calculating rations for various purposes. For Agricultural Juniors in Animal Husbandry and Dairying, and General Agricultural Courses. Elective for others.

Prerequisites—Chemistry 51 and 52. 2 Rec., 1 Lab. per week. 2d S.

55. Veterinary Anatomy.                    Prof. Eckman. 105 M.H.

Lectures and recitations upon the form and structure of the domesticated animals. Special attention is paid to the study of the horse and cow. Skeletons, various anatomical specimens, models, charts and lantern slides are used to make the subject as practical as possible. The purposes of this subject are to show the relation between the skeleton and the form of the animal, to acquaint the student with the various
important organs of the body and to serve as a foundation for the study of animal diseases. For Animal Husbandry Juniors. Elective for others. 

3 Rec. per week. 1st S.

56. Animal Diseases. 

Prof. Eckman. 105 M.H. 

A study of the more common diseases of farm animals and methods of prevention and treatment, simple surgical operations, horse-shoeing and soundness. For Animal Husbandry Juniors. Elective for others. 

Prerequisite—Animal Husbandry 55. 3 Rec. per week. 2d S.

57. Animal Breeding. 

Prof. Eckman. 105 M.H. 

A study of the principles and practices of breeding farm animals. Practice is given in studying and tracing out pedigrees. For Seniors in Animal Husbandry and Dairy Course. 

Prerequisite—Animal Husbandry 51. 2 Rec., 1 Lab. per week. 1st S.

58. Live Stock Management. 

Prof. Eckman. 105 M.H. 

Lectures and recitations upon the care and management of breeding and show animals. Elective for Agricultural Seniors. 

Prerequisites—Animal Husbandry 51, 54, 56, and 57. 

3 Rec. per week. 2d S.

61. Poultry. 

Asst. Prof. Mitchell. 209 M.H. 

In this subject are discussed the location of a poultry farm, poultry buildings, poultry house construction, types and breeds of poultry, caponizing, killing and dressing, and fattening. Elective for Agricultural Seniors. 

2 Lec., 1 Lab. per week. 1st S.


Asst. Prof. Mitchell. 209 M.H. 

This covers the subjects of poultry foods and feeding, incubation, brooding, markets, poultry diseases, and poultry farm problems. One laboratory period and two lectures per week. Elective for Agricultural Seniors. 

2 Lec., 1 Lab. per week. 2d S.

63. Animal Diseases. 

Prof. Eckman. 105 M.H. 

A continuation of Animal Husbandry 56. Practice is given in diagnosing diseases and treating such cases as can be found in the vicinity of Durham. Elective for Agricultural Seniors. 

Prerequisite—Animal Husbandry 56. 3 Rec. per week. 1st S.

64. Poultry. 

Asst. Prof. Mitchell. 209 M.H. 

Special work in poultry. The work of this subject is to be arranged with the instructor. For Agricultural Seniors. 

1 to 3 hours’ credit. 2d S.
65. Live Stock Markets and Products. Mr. Fawcett. 105 M.H.

A study of the various kinds of live stock markets and of the methods and regulations applying to the transportation of live stock. Some time will be spent in a study of the large live stock centers, the stock yards, and the government inspection of animals before and after slaughter. The various cuts of meats, and butchering of animals on the farm will be discussed. References will be supplied the student for individual work. Occasional trips will be taken to slaughter houses and packing-plants. Elective for Animal Husbandry Seniors.

Prerequisite—Animal Husbandry 52. 3 Rec. per week. 1st S.

ASTRONOMY.

PROF. PETTEE

2. Astronomy. Prof. Pettee. 102 T.H.

A short culture subject designed to give the student a simple explanation of the many phenomena constantly exhibiting themselves in the universe and to acquaint him with the present state of astronomic science. Elective for Arts and Science Juniors and Seniors.

2 Rec. per week. 2d S.

BOTANY.

PROF. BUTLER, ASST. PROF. BLACK, DR. OTIS.

51. General Botany. Asst. Prof. Black. 206 N.H.

Morphology and histology of plants. For Agricultural Sophomores. Elective for other students. Given in two sections.

1 Lec., 2 Lab. per week. 1st S.

52. General Botany. Asst. Prof. Black. 206 N.H.

Organography and classification of plants. For Agricultural Sophomores. Elective for other students including Freshmen. Given in two sections.

Prerequisite—Botany 51. 1 Lec., 2 Lab. per week. 2d S.

53. Plant Physiology. Prof. Butler, Dr. Otis. 202 N.H.

Structure and properties of the cell, absorption and movement of water; metabolism; growth and irritability. For Forestry, and Horticultural Juniors. Elective for other students.

Prerequisite—Botany 52. 1 Lec., 2 Lab. per week. 1st S.

54. Plant Histology. Asst. Prof. Black. 206 N.H.

Technique, characterization and differentiation of plant tissues. Comparative histology. For Forestry Juniors. Elective for other students.

Prerequisite—Botany 52. 3 Lab. per week. 2d S.
55. General Bacteriology. Asst. Prof. Black. 206 N.H.
  Lectures on the morphology and physiology of the bacteria, the principal bacterial diseases, the rôle of bacteria in the arts and industries. For Home Economics Juniors. Elective for other Juniors and Seniors. 3 Lec. per week. 1st S.

  Prerequisite—Botany 55 except for Animal Husbandry and Dairy students.

  Fungal Diseases of plants, their symptoms, cause and prevention. For Forestry and Horticultural Seniors. Elective for other students. 1 Lec., 2 Lab. per week. 1st S.

  Morphology and biology of the fungi. For advanced students. 2 Lab. per week. 2d S.

  Technique. Origin and development of the embryo. For advanced students. 2 Lab. per week. 1st S.

60. Advanced Botany. Prof. Butler.
  For advanced students. Prerequisites will depend on the nature of the subject selected for study.
  Credit and hours by arrangement. 2d S.

  For advanced students. Prerequisites will depend on the nature of the subject selected for study.
  Credit and hours by arrangement. 1st S.

CHEMISTRY.

PROF. JAMES, ASSOC. PROF. PERLEY, MR. STEWART, MR. GRANT.

  Lectures and recitations on general and theoretical chemistry, illustrated by experiments, charts, specimens, lantern views, etc. Solution of chemical problems will be required. For Agricultural and Engineering Freshmen. Elective for other Freshmen. 3 Rec. per week. 1st S.
52. Inorganic Chemistry. 
\( \begin{align*} \text{I.} & \quad \text{Prof. James.} & 109 \text{ C.H.} \\
\text{II.} & \quad \text{Assoc. Prof. Perley.} & 204 \text{ C.H.} \end{align*} \)

A continuation of Chemistry 51, but the time will be mainly spent on the metallic elements, their metallurgy, salts, etc.

Prerequisite—Chemistry 51. 
3 Rec. per week. 2d S.

54. Qualitative Analysis. 
Assoc. Prof. Perley, Mr. Grant. 201 C.H.

Laboratory practice, with occasional lectures and recitations. The student is expected to become proficient in the separation and detection of the common acids and bases and to keep a full set of notes. For Engineering Freshmen.

Prerequisite—Chemistry 51. 
3 Lab. Periods per week. 2d S.

55. Inorganic Chemistry. 
Mr. Grant. 204 C.H.

Similar to Chemistry 51. For Home Economics Freshmen.

3 Rec. per week. 1st S.

56. Special Chemistry. 
Mr. Grant. 204 C.H.

A continuation of Chemistry 55 and differing slightly from Chemistry 52.

Prerequisite—Chemistry 55. 
3 Rec. per week. 2d S.

57. Special Organic Chemistry. 
Mr. Grant. 109 C.H.

A study of the more important organic compounds from the viewpoint of the Home Economics student. For Home Economics Sophomores.

Prerequisites—Chemistry 55 and 56. 
3 Rec. per week. 1st S.

59. Introductory Qualitative Analysis.
Assoc. Prof. Perley, Mr. Grant. 201 C.H.

Introduction in qualitative analysis specially arranged for Agricultural students. For Agricultural and Mechanic Arts Sophomores. Elective for Arts and Science students.

Prerequisite—Chemistry 51. 
2 Lab. per week. 1st S.

60. Quantitative Analysis. 
Mr. Stewart. 201 C.H.

Introduction to quantitative analysis, consisting of the analyses of simple compounds and materials such as feeds, fertilizers, soils, water, etc. For Agricultural Sophomores.

Prerequisites—Chemistry 51 and 52. 
3 Lab. Periods per week. 2d S.

61. Qualitative Analysis. 
Assoc. Prof. Perley, Mr. Grant. 201 C.H.

Advanced work for Chemical Sophomores on insoluble substances and the rarer elements, to precede Chemistry 65.

20 Lab. exercises. 1st S.
FOUR-YEAR COURSES.

63. Inorganic Preparations. Prof. Perley, Mr. Grant. 201 C.H.
Study of the preparation and purification of inorganic compounds, including their extraction from minerals. For Chemical Sophomores.
Prerequisites—Chemistry 51 and 52. 12 Lab. exercises. 1st S.

65. Quantitative Analysis. Mr. Stewart. 103, 205 C.H.
A preliminary study of quantitative analysis to familiarize the student with the general methods of chemical manipulation and analysis. For Chemical Sophomores. Elective for Arts and Science Sophomores, Juniors and Seniors, provided laboratory facilities permit.
Prerequisites—Mathematics 52, German 1 and 2, Chemistry 54.
4 Lab. per week. 1st S.

66. Quantitative Analysis. Mr. Stewart. 103, 205 C.H.
A continuation of Chemistry 65. For Chemical Sophomores.
5 Lab. per week. 2d S.

Lectures and recitations. A study of the chemistry of the carbon compounds. For Chemical Sophomores. Elective for Arts and Science students.
Prerequisites—Chemistry 51 and 52. 2 Rec. per week. 1st S.

A continuation of Chemistry 67. For Chemical Sophomores. Elective for Arts and Science students.
Prerequisite—Chemistry 67.
3 Rec. per week. 2d S.

71. Organic Chemical Laboratory. Prof. James. 205 C.H.
Consists mainly of laboratory practice in preparing and purifying organic compounds. Lectures and recitations will be held from time to time in connection with the practice. For Chemical Juniors. Elective for Arts and Science students.
Prerequisite—Chemistry 68.
3 Lab. per week. 1st S.

73. Advanced Quantitative Analysis. Mr. Stewart. 205-103 C.H.
This subject will be made to fit the end which each student has in view and will be largely an individual one. For those students desiring to specialize in agricultural and food chemistry the analysis made will tend in the main toward agricultural products, fertilizers, mucks, marls, manures, dairy products, waters, foodstuffs, sugars, etc. For the student wishing to enter metallurgical works, the analyses will be in the main upon iron and steel and other metals, ores, limestones, slags, alloys, fuels, etc. As a preparation for the study of medicine, work will
be done on poisons, drugs, foods, urine, etc. Other lines will be arranged to meet the wants of the individual student. Each student will be given some practice in all of the branches of agricultural, metallurgical, medical, sanitary and industrial chemistry, in order to lay a foundation for any future work which may be required of him. A short study in gas and oil analysis will also be provided. For Chemical Juniors.

Prerequisite—Chemistry 65.

74. Advanced Quantitative Analysis. Mr. Stewart. 205–103 C.H.
A continuation of Chemistry 73. For Chemical Juniors.

Lab. per week. 1st S.

75. Physical Chemistry. Assoc. Prof. Perley. 204 C.H.
Advanced study of chemical theory. Practical experiments will be performed with the aid of the student, in the determination of vapor density, molecular weights, specific heat, etc.; and the study of isomorphism, diffusion of gases, solutions, ionization, electrolysis, molecular and atomic volume, thermochemistry, equilibrium, the phase rule, etc., will take up much of the time. For Chemical Juniors or Seniors. Elective for Arts and Science students.

Prerequisites—Chemistry 51 and 52.

Rec. per week. 1st S.

*76. Physical and Electro Chemistry, Lectures.

Assoc. Prof. Perley. 204 C.H.
A continuation of Chemistry 75. For Chemical Juniors or Seniors. Elective for Arts and Science students.

Rec. per week. 2d S.

77. Advanced Inorganic Chemistry. Prof. James. 109 C.H.
Advanced study of the elements and their compounds. For Chemical Juniors and Seniors. Elective for Arts and Science students.

Prerequisites—Chemistry 51 and 52.

Rec. per week. 1st S.

*78. Industrial Chemistry. Assoc. Prof. Perley. 204 C.H.
Lectures on chemical manufactures, such as sugar, sodium carbonate, fertilizers, sulphuric acid, glass, matches, paints, dyes, soaps, illuminating gas, petroleum, the processes employed in the smelting of ores, of iron, lead, copper, zinc, silver, gold, etc., and the methods used in refining these metals. The lectures are illustrated by stereopticon and by specimens of products. Trips to the leading New England cities to examine important chemical manufactures will be taken as far as practicable. For Chemical Juniors or Seniors. Elective for Arts and Science students.

Prerequisites—Chemistry 51 and 52.

Lec. per week. 2d S.

* Chemistry 78 is given in alternate years with Chemistry 76.
FOUR-YEAR COURSES.

79. Assaying. Assoc. Prof. Perley. 7 C.H.

A study in the fire assay of gold and silver ores. For Chemical Seniors.

Prerequisite—Chemistry 65. Seventeen exercises. 1st S.


Especially arranged for students of the Chemical Engineering Course. May merge at any time into 84 and will usually do so about the middle of the first semester. For Chemical Seniors.

6 Lab. per week. 1st S.


The work of the last semester of the Chemical Engineering Course is given up to the special study of some selected subject in any branch of chemical science and the student is required to present a thesis showing him to be capable of independence of thought and manipulation. For Chemical Seniors.

7 Lab. per week. 2d S.

DAIRYING.

PROF. RASMUSSEN, MR. WILSON.


Nutritive and economic value of milk; milk hygiene, and the relation of milk to public health; market milk, modified milk, condensed milk, milk powders, fermented milks; butter, cheese and ice cream. Laboratory exercises are given in manufacture and in testing purity of dairy products. Elective for Home Economics and Arts and Science Juniors and Seniors.

2 Lec., 1 Lab. per week. 1st S.

52. Farm Dairying. Mr. Wilson. Dairy Bldg.

Dairying in its relation to other branches of agriculture and other industries; study of the composition of milk; the use of the Babcock test, and tests for determining acidity of milk; the use of the lactometer in detecting adulteration of milk; value and methods of keeping records of dairying cows; cooperation in dairying.

2 Lec., 1 Lab. per week. 2d S.


A study of the secretion, and of the chemical and physical properties of milk; different systems of creaming, and factors influencing efficiency of hand separators; pasteurization, cream ripening, commercial starters, churning and machinery. Required for Animal Husbandry and Dairy Juniors. Elective for other Agricultural students.

Prerequisite—Dairying 52. 2 Lec., 1 Lab., per week. 1st S.
A study of the value of milk as a food; the production and handling of market milk, of certified and modified milk, and commercial milk inspection. Exercises will be given in the judging of milk and cream and scoring of dairy barns. For Animal Husbandry and Dairy and General or Teaching Juniors. Elective for all other students.
Prerequisite — Dairying 52. 2 Lec., 1 Lab. per week. 2d S.

Lectures and recitations on the organization, location, construction and operation of factories; special problems connected with the manufacture of butter; dairy conditions in foreign countries; scoring of butter. Elective.
Prerequisites — Dairying 52 and 53. 2 Lec., 1 Lab. per week. 1st S.

Methods of bacteriological analysis of milk and its products; isolation and study of the different types of dairy bacteria; relation of bacteria to milk and its products; study of effect of separation, clarification, pasteurization, aération, and straining on bacteria in milk; and the application of bacteriological principles to the dairy industry. Elective for Animal Husbandry and Dairy Seniors.
Prerequisite — Botany 56. 1 Lec., 2 Lab. per week. 1st S.

Lectures and laboratory work covering the details of manufacture, curing and marketing of the more important kinds of cheese.
Prerequisite — Dairying 52. 2 Lec., 1 Lab. per week. 2d S.

A study of the making, handling, and marketing of lacto, ices, and ice cream. Elective.
Prerequisite — Dairying 52. 1 Lec., 1 Lab. per week. 2d S.

Practice in judging milk, cream, butter, cheese and ice cream. Elective.
Prerequisites — Dairying 52, 53, 54. 1 Lec., 1 Lab. per week. 2d S.

64. Dairy Research. Prof. Rasmussen. Dairy Bldg.
A study of the work of the experiment stations and other dairy literature. Elective.
Prerequisite — 6 credit hours in Dairying. 2 Rec. per week. 2d S.
FOUR-YEAR COURSES.

DRAWING.

PROF. HUDDLESTON, MR. LATON.

These subjects are of an industrial and cultural nature and include the mathematical, architectural and free-hand branches of the subject. Recitation or lecture requires one hour in the class room with assigned work to be done outside. Drawing period requires a minimum of two and one-half hours in the drafting room.

Partial credit may be given for work done in preparatory schools if the work is satisfactory to the department. In order to get credit the student must submit for examination the work done in the preparatory school. No college credit will be given for work submitted for entrance.

Students are advised not to purchase drawing materials before consultation with the drawing instructor.

51. Engineering Drawing. Mr. Laton. 3-52 D.H.

A subject devoted to the fundamentals of engineering drawing and includes free-hand lettering; the use of drawing instruments; inking; tracing; orthographic projection as a study of the relation of different views of an object; and isometric and oblique projection as a study in the pictorial representation of an object. Text used is "Engineering Drawing" by French. For Engineering and Mechanic Arts Freshmen. 2 drawing periods per week. 1st S.

54. Agricultural Drawing.

Prof. Huddleston and Mr. Laton. 3-52 D.H.

Instruction in this subject includes drafting room exercises in free-hand lettering; the use of drawing instruments; projection drawing as a study of the relation of different views of a given object or structure; isometric drawing as a study in pictorial representation; together with the drawing of plans and elevations of simple farm structures. Textbook study is given to farm building construction, heating, lighting and ventilation, including necessary bills of materials and approximate cost of construction. Text used is "Farm Structures" by Ekblaw. For Agricultural Freshmen. 2 drawing periods per week. 2d S.

56. Descriptive Geometry.

Mr. Laton. 3-52 D.H.

An application of the principles of descriptive geometry to the solution of problems in points, lines, planes and solids; including practical problems on bridge beams, rafters, piping, etc. Text used is "Descriptive Geometry" by Miller. For Electrical and Mechanical Freshmen.

Prerequisites—Drawing 51 and Mathematics 53. 1 Lec.; 2 drawing periods per week. 2d S.
57. Machine Drawing. Mr. Laton. 2-39 D.H.
Detail and assembly drawing of machines and machine parts; making of blue-prints; instruction in drafting room practice and standards. For Electrical and Mechanical Sophomores.
Prerequisite—Drawing 51. 3 drawing periods per week. 1st S.

58. Descriptive Geometry. Mr. Laton. 3-52 D.H.
An application of the principles of descriptive geometry to the solution of problems in points, lines, planes and solids; including practical problems arranged to meet the needs of Mechanic Arts Students. Text used is "Descriptive Geometry" by Miller. For Mechanic Arts Freshmen.
Prerequisites—Drawing 51 and Mathematics 53.
1 Lec.; 2 drawing periods per week. 2d S.

Detail and assembly drawing of machines and machine parts; making of blue-prints; instruction in drafting room practice and standards with a brief study of cams and gears. For Mechanic Arts Sophomores.
Prerequisite—Drawing 51. 3 drawing periods per week. 2d S.

63. Free-hand Drawing. Prof. Huddleston. 3-55 D.H.
Pencil drawing from geometrical models as a study of proportion, form and free-hand perspective, followed by pencil and charcoal sketching from plaster casts of historic ornament and antique sculpture. Elective for all students. 2 drawing periods per week. 1st S.

63a. Advanced Free-hand Drawing. Prof. Huddleston. 3-55 D.H.
A continuation of charcoal drawing from the antique with special work to meet the needs of the students in pen and ink sketching and rendering and modeling in clay from relief ornament and sculpture. Elective for all students.
Prerequisite—Drawing 63; 64 or 69. 2 drawing periods per week. 1st S.

64. Free-hand Drawing. Prof. Huddleston. 3-55 D.H.
Same as Drawing 63. 2 drawing periods per week. 2d S.

64a. Advanced Free-hand Drawing. Prof. Huddleston. 3-55 D.H.
Same as Drawing 63a. 2 drawing periods per week. 2d S.

Note.—The above subjects of Drawing 63, 63a, 64, and 64a are of special value to students who expect to enter the field of teaching, nature study or biological research and are elective for all students subject to such conditions as their respective divisions and the Head of the department of drawing may prescribe.
65. **Architectural Drawing.**

Prof. Huddleston. 2-39 D.H.

Drafting room exercises devoted to an analytical study of house plans and modern methods of building construction followed by quarter-inch scale working drawings with necessary scale and full-size details for a small frame house designed by the student with reference to local conditions. For Mechanic Arts Juniors.

*Prerequisites—Drawing 51 and Shop 60.*

2 drawing periods per week. 1st S.

66. **Architectural Drawing.**

Prof. Huddleston and Mr. Laton. 2-39 D.H.

A continuation of Drawing 65 with special attention given to interior, exterior and framing details followed by a brief study of sheet metal and ornamental iron work. For Mechanic Arts Juniors.

*Prerequisite—Drawing 65.* 2 drawing periods per week. 2d S.

67. **House Planning.**

Prof. Huddleston. 2-39 D.H.

Instruction is given in free-hand lettering; the use of drawing instruments; and projection drawing as a study of the relation of views of a given object or structure; together with the drawing and an analytical study of house plans with special reference to local conditions. For Home Economics Freshmen. 2 drawing periods per week. 1st S.

68. **House-Structure.**

Prof. Huddleston. 2-39 D.H.

A subject dealing with the house-structure considered from the standpoint of economics and of architecture. Lectures and recitations devoted to the study of the relation of the house plan to home making; to the individual family; individual site, garden and accessory buildings; supplemented by the preparation of working drawings and details of a house designed by the student to conform to specified requirements. For Home Economics Freshmen.

*Prerequisite—Drawing 60. Parallel—Home Economics 2.*

1 Lec.; 1 drawing period per week. 2d S.

69. **Free-hand Drawing.**

Prof. Huddleston. 3-55 D.H.

Pencil drawing from geometrical models as a study of proportion, form and free-hand perspective, followed by pencil and charcoal sketching from plaster casts of historic ornament and antique sculpture. For Home Economics Sophomores. 2 drawing periods per week. 1st S.

70. **Color and Design.**

Prof. Huddleston. 3-55 D.H.

The first half of the semester will consist of lectures on color theories, harmonies and qualities based on spectral colors and supplemented with studio work with water-color.
The second half of the semester will consist of lectures on the principles of design, supplemented by studio work of color problems applicable to home decorations and costume design.

The object of this subject is to give to students a working knowledge of color such as will help them to express themselves appropriately in their clothing as well as develop good taste in color selections for home decoration. For Home Economics Sophomores.

Prerequisites—Drawing 63; 64 or 69.

1 Lec.; 1 drawing period per week. 2d S.

72. Practical Mathematics. Mr. Laton. 2–49 D.H.

The instruction in this subject includes useful applications of algebra, geometry and the first principles of trigonometry and is directly related to practical problems the student will meet after he has finished his course. For Mechanic Arts Seniors.

Prerequisite—Drawing 66. 1 Rec. per week. 1st S.

ECONOMICS.

PROF. SMITH, MR. HAM.

1. Elementary Economics. Prof. Smith. 204 Lib.

This subject is designed to introduce the student into the broad field of economics: the kind and nature of wealth; its distribution among producers in the form of rent, wages, interest and profits; the part played by nature, by labor, and by capital in wealth production; the field of organized labor; the forms and relative advantages of different types of business organization, including corporations and trusts; the subject of markets and the forces which determine prices; the principles of credit, banking and foreign exchange; the tariff and taxation.

Two sections: one for Agricultural and Engineering Seniors; the other for Arts and Science and Mechanic Arts Sophomores.

2 Lec., 1 Rec. per week. 1st S.

2. Geography of Commerce. Prof. Smith. 201 Lib.

This subject gives rather wide information regarding the facts and principles of commerce, and the commercial development of nations. The importance of natural physical conditions as determinants of commerce is emphasized, as well as that of transportation and exchange facilities. Ports and ocean trade routes are also considered. The more important commodities of commerce are studied and the regions of their production, their markets and prices. Finally a comparison is made of the principal commercial countries of the world. For Arts and Science Freshmen and Sophomores.

2 Lec., 1 Rec. per week. 2d S.
FOUR-YEAR COURSES.

4. Money and Banking. Prof. Smith. 204 Lib.

A study of the principles of money; coinage and coinage laws; legal tender; the relation of money and prices; bimetallism; the kinds of banks and the services they render; the national banking systems of this and other countries, including our new Federal Reserve System. Elective for Arts and Science Juniors and Seniors and for Agricultural and Engineering Seniors.

Economics 4 and 6 are given in alternate years. Economics 4 will be given in 1916-1917.

Prerequisite—Economics 1.

2 Lec., 1 Rec. per week. 2d S.

5. Labor Problems. Prof. Smith. 204 Lib.

This subject is concerned primarily with the problems of organized labor; strikes and their causes, lock-outs, boycotts, the open and closed shop, minimum wage, settlement of disputes by arbitration and other means; compensation for industrial accidents, and labor legislation. Some attention is given in this subject to such organizations as the American Federation of Labor and the Industrial Workers of the World, their ideals, aims and methods. Elective for Arts and Science Juniors and Seniors and Agricultural Seniors.

Economics 5 and 9 are given in alternate years. Economics 5 will be given in 1916-1917.

Prerequisite—Economics 1.

3 Rec. per week. 1st S.


The subject-matter has to do with the costs of conducting governments, the methods of raising the necessary funds, including the great problems of taxation, the kinds of taxes, and the way they are distributed. Property, income and inheritance taxes, tariffs and internal revenue duties, the single tax and progressive taxes are considered. Elective for Arts and Science Juniors and Seniors and Agricultural and Engineering Seniors.

Economics 4 and 6 are given in alternate years. Economics 6 will be given in 1917-1918.

Prerequisite—Economics 1.

1 Lec., 2 Rec. per week. 2d S.

8. Agricultural Economics. Prof. Smith. 204 Lib.

Economic problems in agriculture, such as prices of farm products, marketing, the produce exchanges, and speculation, co-operative organizations and rural credit, constitute the work of the semester. In addition, each member of the class is expected to make a special individual study of some topic in the field. Required for Agricultural Seniors. Elective for Arts and Science Juniors and Seniors.

Prerequisite—Economics 1.

3 Lec. per week. 2d S.
A study of the methods used to finance corporations; the various types of stocks and bonds; stock exchanges; underwriting; government regulation of corporations. Elective for Arts and Science Juniors and Seniors and Agricultural Seniors.
Economics 5 and 9 are given in alternate years. Economics 9 will be given in 1917-1918.
Prerequisite—Economics 1. 3 Rec. per week. 1st S.

A study of the fundamental principles of accounting, first in private or individual business, then the partnership, and closing with the corporation. Interpretation of accounts, business statements and records. The subject is intentionally made to cover a broad field that it may be of the greatest service to students from all three divisions, both men and women. Elective for Arts and Science Sophomores and Juniors, and for Seniors from all divisions.
2 Rec., 1 Lab. per week. 1st S.

The study of cost-accounting as it operates in a modern manufacturing concern. The student handles and becomes familiar with the best cost-keeping forms and records. Careful study is made of costs, especial attention being given to overhead expense or burden, including the problems of depreciation and idle factor time. It is presumed to be a more professional subject than Economics 13 on which it is based. Elective for Arts and Science Sophomores and Juniors, and for Seniors from all divisions.
Prerequisite—Economics 13. 2 Rec., 1 Lab. per week. 2d S.

DEPARTMENT OF EDUCATION AND PSYCHOLOGY.
PROF. SIMMERS.
The training of teachers for high schools is recognized as being one of the important functions of New Hampshire College. In order to do this more adequately a department of education and psychology has been established which has as its aims:

1. To offer prospective high-school teachers, principals, and superintendents the necessary technical training for their profession.

2. To present educational history and problems in their more philosophic and scientific aspects so as to be valuable to all college students whether they become teachers or not.
To this end, it is expected that all students intending to teach will elect at least the following subjects in the department of education and psychology, making a total of thirteen hours,—Education 1 or 3 or 6, and 2 and 5, Psychology 52 and 53.

The prospective teacher should also take either the general or teacher’s course in agriculture, the manual arts course, or the course in home economics. Or, if registered in the Arts and Science division, he should elect a major and one or two minors in its several departments. The aim should be to attain as intensive and extensive scholarship as possible during the four years spent in college.

**Education**

**PROF. SIMMERS.**

*1. History of Education.*

Prof. Simmers. 102 T.H.

Before and during the Middle Ages. An attempt is made to show the relationship between the industrial, intellectual, social, philosophic, and religious ideals of the times, and the varying conceptions of aim, method, curricula, and organization of educational agencies. Required of Agricultural Juniors. Elective for all other students. Lectures, assigned readings and discussion. Sophomore subject. *2 Rec. per week. 1st S.*

*3. History of Education.*

Prof. Simmers. 102 T.H.

Modern Period. This subject is quite similar to Education 1 in aim and method of treatment. It deals with the progress of society and related educational problems from the time of Comenius (beginning of seventeenth century) to the present time. It also attempts to show the origin and evolution of present theory and practice in education. Required of Agricultural Juniors. Elective for all other students. Lectures, assigned readings and discussion. Sophomore subject. *2 Rec. per week. 1st S.*

4. School Hygiene.

Prof. Simmers. 102 T.H.

The physical welfare of the pupil is considered in relation to his moral, social and intellectual development. Hygiene of play, study, work, daily programs, the selection of school building site, heating, ventilation, medical inspection, communicable diseases, detection and treatment of defects of the senses, laws of fatigue and its relief and prevention, etc., are studied. Required of Manual Arts Juniors and Agricultural Seniors. Elective for all other students. Lectures, assigned readings and discussion. Junior subject. *2 Rec. per week. 2d S.*

*Education 1 and 3 are given in alternate years. Education 1 is given in 1916–1917.*
5. Secondary Education.  Prof. Simmers.  102 T.H.

A systematic study of secondary school problems is made. Some of the topics considered are: The proper place and function of the high school, its relation to the grades, college and practical life; methods of instruction, program of studies, examinations and promotions, educational values of the various studies, qualities of an efficient teacher, and relation to the various elements of the school community. Each student will be required to make systematic observations in schools near Durham. Required of Agricultural and Manual Arts Juniors. Elective for all other students. Lectures, assigned readings and discussion. Senior subject.  

3 Rec. per week.  1st S.

6. History and Theory of Industrial Education.  Prof. Simmers.  102 T.H.

Some of the topics considered are: Primitive industry and educational practice, Industrial activity in the monasteries, the apprenticeship system, the Fellenberg Institute at Hofwyl, the manual training, agricultural, and home economics movements; Federal and state legislation concerning industrial education, vocational guidance. Typical industrial, trade, evening, and continuation schools, of the United States will be studied. For Manual Arts Seniors. Elective for all other students. Lectures, assigned readings and discussion. Senior subject.  

2 Rec. per week.  2d S.

*7. Principles of Education.  Prof. Simmers.  102 T.H.

In this subject a general background for educational thought and practice is sketched. The biological, psychological, social, and ethical bases of education are considered. The aim is to give underlying principles and to show how they should function in the work of the grades and the high school. The subject is fundamental for those students intending to become principals or superintendents of schools. Elective for all students. Lectures, assigned readings and discussion. Senior subject.  

Prerequisite—Psychology 52.  3 Rec. per week.  1st S.

*8. Administration and Supervision.  Prof. Simmers.  102 T.H.

This subject is designed for students who contemplate engaging in administrative or supervisory work. It aims at a systematic study of organization and management of school systems, promotion of pupils, standards of efficiency, powers and duties of the board of education, school law, school finance, etc. Elective for all students who have taken the other subjects in education. Lectures, assigned readings and discussion. Senior subject.  

2 Rec. per week.  1st S.

Psychology 52, 53.  See page 124.

* Education 7 and 9 are given in alternate years. Education 7 is given in 1916-1917.
FOUR-YEAR COURSES.

ELECTRICAL ENGINEERING.

PROF. HEWITT, ASST. PROF. HITCHCOCK.

1. Dynamo Electric Machinery.  
   Prof. Hewitt. 1-29 D.H.
   This subject includes a general study of the various electrical quantities such as electromotive force, current, resistance, permeability of iron; the use of standard measuring instruments; direct and alternating current dynamos and motors including elementary theory. A large number of practical problems illustrate the applications of the above. One exercise per week is devoted to laboratory experiments illustrating the practical application of theory. For Electrical and Mechanical Juniors.
   Prerequisites—Physics 52 and Mathematics 56.
   3 Rec., 1 Lab. per week. 1st S.

2. Dynamo Electric Machinery.  
   Asst. Prof. Hitchcock. 1-26 D.H.
   A continuation of Electrical Engineering 1. A study of electrical measuring instruments, cells, batteries, electrolysis, electroplating, electrotyping, the elements of photometry and electric illumination, inductance, capacity, and elementary alternating currents. One exercise per week is devoted to laboratory experiments illustrating the practical application of theory. For Electrical and Mechanical Juniors.
   Prerequisite—Electrical Engineering 1. 3 Rec., 1 Lab. per week. 2d S.

3. Telegraph and Telephone.  
   Asst. Prof. Hitchcock. 1-26 D.H.
   A study of the acoustic and electrical principles of telephony, transmitting and receiving apparatus, magneto and common-battery switchboards and accessories, selective party-line systems, intercommunicating systems, overhead and underground construction, phantom, simplex, and composite circuits, transpositions, etc. The principles of telegraphy, sounders, repeaters, etc. Wireless telegraphy and telephony. Automatic devices, electric signaling for purposes of alarms, railroads, etc. Elective.
   1 Rec. per week. 1st S.

6. Application of Electricity to Agriculture.  
   Prof. Hewitt. 1-29 D.H.
   Arranged for and adapted to students taking agriculture. The subject consists of a general study of the electric dynamo and motor, method of connecting same to the supply circuit and the care and operation of each; a general study of simple problems in transmission, methods of wiring for electric power and lighting; the telephone including the general principles upon which it operates and different systems of installation; electric bell wiring and signaling apparatus; simple water power developments and equipments; electrical utensils for domestic use, etc. Elective.
   2 Rec., 1 Lab. per week. 2d S.
   A series of lectures giving a brief history of electrical engineering and
   outlining some of the advantages of this profession. This series of
   lectures has been planned in order to help a student in the choice of
   his course after his Freshman year. Elective without credit. For
   Electrical and Mechanical Freshmen.  1 Lec. per week.  Last half 1st S.

   Arranged for and adapted to students taking the Mechanic Arts
   Course. Open only to Seniors in the Mechanic Arts Course.
   2 Rec., 1 Lab. per week.  1st S.

   A study of the properties of periodic curves, the effects of inductance
   and capacity, the use of complex quantities, and a more detailed study
   of generators, motors, transformers, converters, and other electrical
   apparatus. For Electrical Seniors.
   Prerequisite—Electrical Engineering 2.  4 Rec. per week.  1st S.

   A continuation and completion of Electrical Engineering 11. Hydro-
   electric developments including the design of reinforced concrete dams
   and power houses and the general subject of water-power engineering;
   high tension power transmission; design of transmission lines and dis-
   tributing systems; selection of apparatus for generating stations and
   distributing systems; lightning protection. For Electrical and Mechan-
   ical Seniors.
   Prerequisite—Electrical Engineering 11.  4 Rec. per week.  2d S.

   The practicability of construction from an economic standpoint;
   determination of the size, type, and seating capacity of cars; track
   location; train schedules; methods of control; train resistance; speed-
   time and current-time curves; selection of motors; the feeder system;
   electrolysis; power station and substation location; storage batteries;
   electric track switches; etc. Illustrated by problems. For Electrical
   Seniors.  
   2 Rec. per week.  2d S.

15. Electrical Laboratory.
   Prof. Hewitt, Asst. Prof. Hitchcock.  Basement D.H.
   An advanced series of experiments. A written report will be re-
   quired for which one additional credit hour will be given. For Elec-
   trical Seniors.  
   2 Lab., 3 Hours' Credit per week.  1st S.
FOUR-YEAR COURSES.

16. Electrical Laboratory.
   Prof. Hewitt, Asst. Prof. Hitchcock. Basement D.H.

   A continuation of Electrical Engineering 15, with experiments of a
   more advanced nature. A written report will be required for which
   one additional credit hour will be given. For Electrical Seniors.
   2 Lab. per week; 3 Hours' Credit. 2d S.

   Prof. Hewitt, Asst. Prof. Hitchcock.

   A deposit of fifteen dollars to cover any damage done to instruments,
   apparatus, etc., is required in this subject. Any unexpended balance is
   refunded at the close of the college year. Where apparatus is con-
   structed as a part of a thesis, it shall remain the property of the de-
   partment. Optional with head of department. For Electrical Seniors.
   1 Rec., 2 Lab. per week. 2d S.

21. Industrial Electricity.
   Prof. Hewitt. 1–29 D.H.

   A careful study of the principles and methods employed in electrical
   measurements; resistance of wire and batteries; current measurement
   by ammeters and electrolysis; the use of electrical measuring instru-
   ments; a series of laboratory experiments specially arranged to meet
   the requirements of chemical engineers. A brief study will be made
   of the dynamo, motor, transformer, primary and secondary batteries,
   arc and incandescent lamps and the general principles of electrical
   distribution. Experiments in electrolysis, electrical furnaces, reduction
   of metals, etc., are provided. For Chemical Seniors.
   2 Rec., 1 Lab. per week. 1st S.

22. Industrial Electricity.
   Prof. Hewitt. 1–29 D.H.

   A continuation of Electrical Engineering 21, but more advanced
   in nature. For Chemical Seniors.
   Prerequisite—Electrical Engineering 21.
   2 Rec., 1 Lab. per week. 2d S.

24. Design of Electrical Machinery.
    Asst. Prof. Hitchcock. 1–28 D.H.

   A study of the design of the more important electrical machines, in-
   cluding the calculation of the dimensions of the machine, both electrical
   and mechanical, and the predetermination of its performance from the
   dimensions. For Electrical Seniors.
   Prerequisite—Electrical Engineering 11. 2 Lab. per week. 2d S.

26. Illuminating Engineering.
    Asst. Prof. Hitchcock. 1–26 D.H.

   A theoretical discussion of the principles of illumination and the ap-
   plication of these principles to concrete examples. For Electrical
   Seniors who do not take Electrical Engineering 18. Elective for other
   Electrical Seniors.
   2 Rec. per week. 2d S.
27. **Contractors and Specifications.** 

The laws and forms of engineering contracts; standard specifications for materials of construction and apparatus. Elective for Mechanical and Electrical Seniors.

Prof. Hewitt. 1–29 D.H.

1 Rec. per week. 1st S.

---

**ENGLISH.**

PROF. RICHARDS, PROF. SCOTT, ASST. PROF. SCUDDER.

51. **English Composition.**

I Prof. Richards. 205 T.H.
II Asst. Prof. Scudder. 208 T.H.

In this subject the student is taught to express himself in clear and concise English. He is drilled in the principles of rhetoric, is given constant practice in the writing of themes, and is required to make monthly reports on his readings in general literature. For all Freshmen.

3 Rec. per week. 1st S.

52. **English Composition.**

I Prof. Richards. 205 T.H.
II Asst. Prof. Scudder. 208 T.H.

A continuation of English 51.

*Prerequisite—English 51.*

3 Rec. per week. 1st S.

53. **Advanced Composition and Literary Criticism.**

Prof. Richards. 205 T.H.

This is a subject in advanced English composition, in which the various forms of writing, such as the essay, the short story, the business letter, and book reviewing are treated. To supplement these exercises the student is required to read and criticize intelligently the writings of at least one noted prose writer and one poet, embodying the results in a carefully prepared essay at the close of the semester. For Mechanical Arts Sophomores. Elective for Arts and Science Sophomores and Juniors.

*Prerequisites—English 51 and 52.*

3 Rec. per week. 1st S.

54. **Introduction to English Literature.**

Prof. Richards. 205 T.H.

A general survey of English literature from the ninth to the twentieth century. To one who intends to teach English it is of fundamental importance. Lectures, recitations and outside reading constitute the work of the semester. Elective for Freshmen, Sophomores and Juniors.

*Prerequisite—English 51.*

3 Rec. per week. 2d S.

55. **The English Novel.**

Prof. Richards. 205 T.H.

The historical development of the English novel and the chief characteristics of modern fiction are studied in this class. Lectures, recitations and extensive outside reading constitute the work of the semester. Elective for Arts and Science and Mechanic Arts Juniors and Seniors.

*Prerequisites—English 51 and 52.*

3 Rec. per week. 1st S.
56. Argumentation and Debating.  Prof. Richards.  205 T.H.

This subject offers training in the fundamental principles of oral debate and written argumentation, acquaints the student with the laws of parliamentary procedure, and introduces him to the rules and customs of state and national legislatures. An essential part of the study—in some respects the most valuable feature—is the practice in formal and extemporary debate, such debates being held at least once a week throughout the semester. Elective for Sophomores, Juniors and Seniors.

Prerequisites—English 51 and 52.  3 Rec. per week.  2d S.

57. Modern English Poetry,  Prof. Richards.  205 T.H.

A study is made of the great poems of English literature written between 1790 and 1890. While special attention is given to the poetry of Wordsworth, Tennyson and Browning, considerable outside reading is required in the works of Shelley, Keats, Rossetti, Arnold and other poets of the nineteenth century. Elective for Arts and Science and Mechanic Arts Juniors and Seniors.

Prerequisites—English 51 and 52.  3 Rec. per week.  1st S.

58. Elizabethan Drama.  Asst. Prof. Scudder.  208 T.H.

A study of the Elizabethan dramatists, exclusive of Shakespeare, from Lyly to the Closing of the Theaters. Constant reading of the plays, with written criticisms and reports, is required. Elective for Sophomores, Juniors and Seniors.

Prerequisites—English 51 and 52.  3 Lec. per week.  2d S.

59. Chaucer.  Prof. Richards.  205 T.H.

Lectures upon the life and times of Chaucer will be given, and the Canterbury Tales will be read and discussed in class. At the close of the study each student will hand in a thesis embodying the results of independent investigation of Chaucerian literature. Elective for Arts and Science Seniors.

Prerequisites—English 52 and 54.  3 Rec. per week.  1st S.


Lectures and extensive outside reading. Elective for Arts and Science and Mechanic Arts Juniors and Agricultural Seniors.

Prerequisites—English 51 and 52.  4 Rec. per week.  2d S.

61. Modern English Prose.  Prof. Richards.  205 T.H.

A study of English prose, exclusive of fiction, in the nineteenth century. Special attention will be paid to the writings of Lamb, Macaulay, Carlyle, Newman, Arnold, Ruskin and Frederic Harrison.
Lectures will be given, and extensive outside reading and written reports at frequent intervals will be required. Elective for Arts and Science Juniors and Seniors.

*Prerequisites—English 51 and 52.*

62. Shakespeare's Plays.

Prof. Richards. 205 T.H.

A study of all of Shakespeare's plays. Recitations and occasional dramatic representations of famous scenes. A large amount of reading required. Elective for Arts and Science Juniors and Seniors.

*Prerequisites—English 51 and 52.*** 3 Rec. per week. 2d S.*

63. Writing for Publication.

Asst. Prof. Scudder. 208 T.H.

A practical study of the preparation of articles for the newspapers and magazines. The student is taught to select the essential and present it tellingly. It is for all whose vocation will demand frequent writing for publication, and as a preparation in part for those who intend to take up newspaper work after graduation. It does not cover the entire field of journalism, but the student will be instructed in the duties of a reporter and be given constant practice in writing news stories. Elective for those who have attained a grade of C or higher in English 52.

*Prerequisites—English 51 and 52 (with the added provision indicated above).*

*ENTOMOLOGY.*

**PROF. O'KANE, MR. CLEVELAND.**

1. Principles of Economic Entomology. Prof. O'Kane. 213 T.H.


*2 Rec., 1 Lab. per week. 1st S.*

2. Applied Economic Entomology. Mr. Cleveland. 213 T.H.

The application of methods of insect control to typical injurious species. Studies in the life histories and habits of important insect pests of orchard, garden and field crops. Elective for Agricultural Juniors and for Arts and Science Sophomores, Juniors and Seniors.

*Prerequisite—Entomology 1.*

*2 Lec., 1 Lab. per week. 2d S.*

3. Insects of Domestic Animals. Mr. Cleveland. 213 T.H.

The insect enemies of domestic live stock; their life histories, habits and means of control. Adapted especially for students in Animal
FOUR-YEAR COURSES.

Husbandry. Elective for Agricultural Seniors and for Arts and Science Juniors and Seniors.

Prerequisite—Entomology 1. 2 Lec. per week. 1st S.


Prof. O’Kane, Mr. Cleveland. 213 T.H.

The life histories, habits and means of control of insects of the household and of stored products. The relation of insects to disease. Adapted especially for students in Home Economics. Elective for Arts and Science Sophomores, Juniors and Seniors, and for Agricultural Juniors and Seniors.

2 Lec. per week. 2d S.

5. Advanced Economic Entomology.

Prof. O’Kane. 213 T.H.

Detailed studies of problems involved in applied entomology. The literature of economic entomology. Investigational methods. Practice in arranging projects. Original investigations in the life history and habits of one or more injurious species. Adapted for advanced students. Elective for Agricultural Seniors and for Arts and Science Juniors and Seniors. Open to students only by permission of head of department. Credit and hours to be arranged.

1st S.

6. Advanced Economic Entomology.

Prof. O’Kane. 213 T.H.

Continuation of Entomology 5. 2d S.

FORESTRY.

PROF. WOODWARD, MR. GAMASH.

51. Principles of Forestry.

Prof. Woodward. 209 M.H.

This subject is intended to give the student a general knowledge of forestry; relation to forests of soil, moisture, light and climatic conditions; the important systems of treating woodlands practised in Europe and the United States; the habits of important economic timber trees and the character and uses of these woods; the preparation of forest maps and working plans, including rough estimates of standing timber and the rate of growth of different stands; the artificial regeneration of forests by seeding and planting; forest fires; the forest regions of the United States; the practice of forestry by the government and states. For all Agricultural Juniors except those in the Forestry Course. Elective for other students, except those taking Forestry 55.

2 Lec., 1 Lab. per week. 1st S.

52. Silviculture.

Prof. Woodward. 209 M.H.

The establishment of forests through artificial regeneration; value of different species; seed collecting; testing and storage; nursery work;
direct seeding; planting; care of plantations; cost of establishing plantations; planting plans. Supplemented by actual nursery and planting work. For Forestry Juniors. Elective for other students.

Prerequisite—Forestry 55. 2 Lec., 1 Lab. per week. 2d S.

53. Dendrology.  Prof. Woodward. 209 M.H.

A study of the habits, distribution and characteristics of the native trees and important introduced trees of the Northeastern States, in both summer and winter conditions, and with particular reference to the prominent and constant features which lead to ready identification; and a general study of the important timber trees of the United States, including the structure of their woods. For Forestry and Mechanic Arts Juniors. Elective for other students who have taken Botany 51 and 52.

3 Lec., 1 Lab. per week. 1st S.

54. Forest Mensuration.  Prof. Woodward. 209 M.H.

Methods of determining the contents and growth of individual trees and of whole forests by different units; use of log rules and the measurement of logs and felled trees; the measurement of standing trees; methods of timber estimating; study of growth in diameter; height, and volume; construction and use of volume and yield tables. This course calls for the use of forest instruments and actual practice in measuring trees and whole stands. For Forestry Juniors. Elective for other students.

2 Lec., 1 Lab. per week. 2d S.

55. Silviculture.  Prof. Woodward. 209 M.H.

A study of the life history of trees; the relation of the different species to light, moisture, soil, temperature and to each other in the forest; reproduction of trees, form and character of stands; the origin and determination of forest types; forest maps; relation of forests to stream-flow; forest descriptions; the improvement of the forest through use and proper treatment; the various systems of cutting and reproducing forests by natural means as practised in Europe and the United States, supplemented by frequent woods practice and demonstrations. For Forestry Juniors. Elective for other students who are taking Forestry 53.

3 Lec., 2 Lab. per week. 1st S.

56. Forest Management.  Prof. Woodward. 209 M.H.

The economic principles underlying the management of forests; the calculation of present and future values of forest property based on productive power; financial considerations of forest management; taxation of forest land; preparation of working plans in Europe, India, and the United States. Includes collateral reading, writing on forestry subjects and discussions. For Forestry Seniors.

Prerequisites—Forestry 52, 53, 54, 55, 57 and 59.

2 Lec., 2 Lab. per week. 2d S.
57. Forest Protection. Prof. Woodward. 209 M.H.
Consideration of practical measures for the protection of forests from fire, insects, fungous diseases, grazing, trespass, and destructive lumbering; and an examination of the federal and state laws relating to forest interests. For Forestry Seniors.
Prerequisites—Forestry 52, 53, 54, and 55. 2 Lec. per week. 1st S.

58. Advanced Forestry. Prof. Woodward. 209 M.H.
Elective for Forestry Seniors. 
Prerequisites—Forestry 52, 53, 54, 55, 57, and 59.
3 Lab. per week. 2d S.

59. Practice of Forestry. Prof. Woodward. 209 M.H.
Development and present status of forestry in different countries; the work of the federal government and its management of the national forests; state forest policies; the lumber industry in the United States; the application of forestry to different regions. For Forestry Seniors. Lectures and Special Readings.
Prerequisites—Forestry 52, 53, 54, and 55. 3 Lec. per week. 1st S.

60. Forest Utilization. Prof. Woodward. 209 M.H.
Advanced elective subject for Mechanic Arts Juniors or Seniors. Work to be arranged to meet the needs of individual students.
Prerequisite—Forestry 53. 3 Rec. per week. 2d S.

61. Advanced Forestry. Prof. Woodward. 209 M.H.
Work to be arranged according to the needs of individual students. Elective for Forestry Seniors.
Prerequisites—Forestry 52, 53, 54, and 55. 3 Rec. per week. 1st S.

FRENCH.
PROF. WHORISKEY, ASST. PROF. WHITMAN.

1. Elementary French. Asst. Prof. Whitman. 102 T.H.
Elements of French Grammar. Reading of simple stories; conversation and dictation. Elective for Arts and Science students. 
3 Rec. per week. 1st S.

2. A continuation of French 1. Asst. Prof. Whitman. 102 T.H.
Elective for Arts and Science students. 3 Rec. per week. 2d S.
Reading and translation; composition. Elective for Arts and Science 
Sophomores. Freshmen who have offered French for admission are 
allowed to take French 3 and 4.
Prerequisite—French 2. 3 Rec. per week. 1st S.

Prerequisite—French 3. 3 Rec. per week. 2d S.

*5. French Literature of the Nineteenth Century.
Asst. Prof. Whitman. 102 T.H. 
Selections from Hugo, Balzac, Sand, Dumas père, Daudet, Gautier. 
Composition. Elective for Arts and Science students.
Prerequisite—French 4. 3 Rec. per week. 1st S.

*6. A continuation of French 5. Asst. Prof. Whitman. 102 T.H. 
Elective for Arts and Science students.
Prerequisite—French 5. 3 Rec. per week. 2d S.

Asst. Prof. Whitman. 102 T.H. 
Corneille; Racine; Molière; Bossuet; Boileau; Mme. de Sévigné; 
La Fontaine. Composition. Elective for Arts and Science students.
Prerequisite—French 4. 3 Rec. per week. 1st S.

Elective for Arts and Science students.
Prerequisite—French 7. 3 Rec. per week. 2d S.

GEOLOGY.

PROF. JACKSON, MR. BATEHELDER.

51. Elementary Geology. Mr. Batchelder. 212 T.H.
The elements of geology. Special attention is given to local geology 
and excursions are made to various points of interest in the vicinity. 
For Agricultural Juniors. Elective for Mechanic Arts Juniors and 
Arts and Science Juniors and Seniors. 3 Rec. per week. 1st S.

52. Historical Geology. Prof. Jackson. 212 T.H.
The development of the continents of the earth and the evolution 
and distribution of the animal and plant forms from the earliest times 
*French 5 and 6 are to be given in 1916-1917 and in alternate years with French 
7 and 8.
FOUR-YEAR COURSES.

105
to the present. Recitations, lectures and laboratory work. Elective for Agricultural and Arts and Science Seniors.

Prerequisites—Zoology 51, 52 and Geology 51.

2 Rec., 1 Lab. per week. 2d S.

GERMAN.

PROF. WHORISKEY, ASST. PROF. WHITMAN.

1. Elementary German.  
    Prof. Whoriskey. 107 T.H.
    Elements of German grammar. Reading of simple stories; conversation; singing of German folk-songs. For Agricultural and Chemical Engineering Freshmen who have not offered German for admission. Elective for others.  
    3 Rec. per week. 1st S.

2. Elementary German.  
    Prof. Whoriskey. 107 T.H.
    A continuation of German 1. For Agricultural and Chemical Engineering Freshmen who have not offered German for admission. Elective for others.  
    3 Rec. per week. 2d S.

3. German Prose.  
    Prof. Whoriskey. 107 T.H.
    Reading and translation. For Chemical Engineering Sophomores. Elective for others. Freshmen who have offered German for admission are allowed to take German 3 and 4.  
    3 Rec. per week. 1st S.

4. German Prose.  
    Prof. Whoriskey. 107 T.H.
    A continuation of German 3. Reading and Translation of Hanff’s Lichtenstein and similar books. Elective.  
    Prerequisite—German 3.  
    3 Rec. per week. 2d S.

*5. Goethe.  
    Prof. Whoriskey. 107 T.H.
    Prerequisite—German 4.  
    3 Rec. per week. 1st S.

    Prof. Whoriskey. 107 T.H.
    A continuation of German 5. Elective for Arts and Science students.  
    Prerequisite—German 5.  
    3 Rec. per week. 2d S.

*German 13 and 14 are to be given in 1916–1917, and German 5 and 6 are to be given in 1917–1918. German 7 and 8 are to be given in 1918–1919.
7. Schiller. Prof. Whoriskey. 107 T.H.

His life and works. The following books are read and criticized:

Prerequisite—German 4. 3 Rec. per week. 1st S.

8. Schiller. Prof. Whoriskey. 107’ T.H.

A continuation of German 7. Elective for Arts and Science students.

Prerequisite—German 7. 3 Rec. per week. 2d S.

9. German Composition and Conversation. Prof. Whoriskey. 107 T.H.

Elective for Arts and Science students. Both aural and oral training are given in German 9, 10, 11 and 12, and opportunity is given to teach under supervision.

Prerequisite—German 4. 3 Rec. per week. 1st S.

10. A continuation of German 9. Prof. Whoriskey. 107 T.H.

3 Rec. per week. 2d S.

11. German Composition and Conversation. Prof. Whoriskey. 107 T.H.

Elective.

Prerequisite—German 4. 3 Rec. per week. 1st S.

12. A continuation of German 11. Prof. Whoriskey. 107 T.H.

Elective.

Prerequisite—German 4. 3 Rec. per week. 2d S.

13. Sudermann. Prof. Whoriskey. 107 T.H.


Prerequisite—German 4. 3 Rec. per week. 1st S.

14. Sudermann and His Contemporaries. Prof. Whoriskey. 107 T.H.

A continuation of German 13.

Prerequisite—German 13. 3 Rec. per week. 2d S.


For chemical Engineering Sophomores. Textbook—Phillip’s “Chemical German.”

3 Rec. per week. 2d S.

* German 13 and 14 are to be given in 1916–1917, and German 5 and 6 are to be given in 1917–1918. German 7 and 8 are to be given in 1918–1919.
† German 9 and 10 are to be given in 1916–1917 and in alternate years with German 11 and 12.
FOUR-YEAR COURSES.

HISTORY.

PROF. SCOTT, PROF. SMITH.

In the subjects in history an important place is given to historical reading carried on in the reference room. In some cases a considerable part of the work is written.

1. History of Europe from 476 to 1492. Prof. Scott. 202 Lib.

Recitations and collateral reading. Elective for Arts and Science Freshmen and Mechanic Arts Juniors. 3 Rec. per week. 1st S.

2. History of Europe from 1492 to 1715. Prof. Scott. 202 Lib.

Recitations and collateral reading. Elective for Arts and Science and Mechanic Arts Freshmen. 3 Rec. per week. 2d S.

3. History of Europe from 1715 to 1815. Prof. Smith. 204 Lib.

Recitations and collateral reading. Elective for Arts and Science Sophomores. Prerequisite—History 1. 3 Rec. per week. 1st S.

4. History of Europe since 1815. Prof. Smith. 204 Lib.

Recitations and collateral reading. Elective for Arts and Science Sophomores. Prerequisite—History 2 or History 3. 3 Rec. per week. 2d S.


Elective for Arts and Science Juniors and Mechanic Arts Seniors. 3 Rec. per week. 1st S.


Elective for Arts and Science Juniors and Mechanic Arts Seniors. 3 Rec. per week. 2d S.


Elective for Arts and Science Seniors. Prerequisite—History 6. 3 Rec. per week. 1st S.
HOME ECONOMICS.

PROF. GOLDFTHWAITE, ASST. PROF. REINER.

1. Personal Hygiene. Prof. Goldthwaite. 105 T.H.
   A short study of the laws of health; the means of improving the
   physical and mental efficiency of the body; individual responsibility for
   race progress. Required of all women Freshmen.
   1 Rec. per week. 1st S.

   Its location, drainage. Outline house-plans. Wall and floor finishes.
   The plumbing, heating, lighting, and ventilation of the house. Labor-
   saving devices. Cleaning processes and care of furniture. Social
   forms and usages. For Home Economics Freshmen.
   Prerequisite—Drawing 67.
   Parallel—Drawing 68. 2 Rec. per week. 2d S.

   The location, ventilation and equipment of the kitchen. Fuels.
   The care of food. The technique of cooking, and the preparation of
   meals. Costs of foods prepared. For Home Economics Freshmen.
   2 Lab. per week. 1st S.

4. Plain Sewing. Prof. Goldthwaite, Asst. Prof. Reiner. 105 T.H.
   The fundamental stitches used in the making of household linens;
   the use of the sewing machine; the making of under-clothing; darning,
   patching, simple embroidery, crocheting. For Home Economics
   Freshmen. 1 Lab. per week. 2d S.

   The textile fibers: their sources, production and uses; study of their
   physical and chemical properties. Examination of the fibers and
   weaves of woven fabrics. Judging of textile fabrics in regard to
   durability, cost and suitability for household or for personal purposes.
   Laundering and cleaning fabrics.
   Prerequisite—Chemistry 56. 1 Rec., 1 Lab. per week. 2d S.

   Prof. Goldthwaite, Asst. Prof. Reiner. 105 T.H.
   Composition and nutritive value of food-stuffs and of foods. Effects
   of heat and cold upon food-stuffs; food preservation and storage.
   Leavening agents. Laboratory practice in the principles of cooking.
   The cost and nutritive value of the foods prepared. Comparative
   economy of foods. For Home Economics Sophomores.
   Prerequisites—Chemistry 56, Home Economics 3 or equivalent, high
   school Physics, or equivalent. 1 Rec., 2 Lab. per week. 1st S.
FOUR-YEAR COURSES.

   Prof. Goldthwaite, Asst. Prof. Reiner. 105 T.H.
   Preparation and service of meals; cost per person. Entertainment
   of guests. For Home Economics Sophomores.
   Prerequisite—Home Economics 7. 1 Rec., 2 Lab. per week. 1st S.

10. Clothing.
   Prof. Goldthwaite. 105 T.H.
   Study of values in textiles, and in clothing. Choice of materials in
   regard to color, quality and cost as related to desired uses. Designing,
   drafting, cutting and making of garments. Use of patterns; care of
   clothing. Home Economics Juniors.
   Prerequisites—Home Economics 4 and 6, Drawing 69 and 70.
   3 Lab. per week. 2d S.

   Prof. Goldthwaite. 105 T.H.
   Composition of the body; its relation to the physical universe. The
   composition, digestion, absorption, assimilation and oxidation of
   food-stuffs. The physiological fuel value of food-stuffs. Methods of
   investigation employed in the study of human nutrition. The food
   requirements of the body as influenced by activity, size, age, sex.
   Problems throughout the semester. For Home Economics Juniors.
   Prerequisites—Home Economics 8, Chemistry 57, Zoology 57.
   3 Rec. per week. 1st S.

   Prof. Goldthwaite. 105 T.H.
   Continuation of Home Economics 11. Problems in dietary calcula-
   tions. Comparative physiological fuel values of foods. Application of
   the principles of human nutrition in the adaptation of diet to varying
   physiological, social and economic conditions. For Home Economics
   Juniors.
   Prerequisite—Home Economics 11. 2 Rec., 1 Lab. per week. 2d S.

   Asst. Prof. Reiner. 105 T.H.
   Applications of theory of color, and of design in house decoration.
   Selection of house furnishings; study of values; estimation of costs, and
   comparisons of sanitary and artistic furnishings. For Home Economics
   Juniors.
   Prerequisites—Drawing 69, 70, Home Economics 2, 6.
   2 Rec. per week. 1st S.

   Prof. Goldthwaite. 105 T.H.
   Chemistry of cleaning; chemistry of leavening agents. Antiseptics
   and disinfectants. Chemistry of the food-stuffs. Elective for Home
   Economics Juniors.
   Prerequisites—Home Economics 12, Botany 55. 3 Lab. per week. 2d S.
Development of costume; comparison of primitive and historic costumes with modern dress; study of national dress. Elective for Home Economics Juniors.
Prerequisite—Home Economics 5. 2 Rec. per week. 2d S.

19. Household Administration. Prof. Goldthwaite. 105 T.H.
Evolution of the home; standards of living; expenditure of the income; organization of the household. Household accounts. Care of the house and family; domestic service. Co-operative housekeeping. Home nursing. For Home Economics Seniors.
Prerequisites—Home Economics 10, 12, Economics 1, Zoology 58, Botany 55. 3 Rec. per week. 1st S.

Problems may be in experimental cooking, dietetics, textiles, economics of family. Elective for Home Economics Seniors.
Prerequisites—Home Economics 10 or 14. Parallel—Home Economics 19. 3 Lab. per week. 1st S.

22. Original Problems. Prof. Goldthwaite. 105 T.H.
Continuation of Home Economics 21. 3 Lab. per week. 2d S.

24. Teachers' Course. Prof. Goldthwaite. 105 T.H.
Prerequisite—Home Economics 10, 12, 13, 19. 3 Rec. per week. 2d S.

HORTICULTURE.

PROF. GOURLEY, ASST. PROF. WOLFF, MR. SCHERRER, MR. MACPAPLANE.

Note.—The college has several hundred fruit trees which are available for the students in studying orchard operations. All types of spray machinery from the knapsack to the power sprayer are used in class work.

52. Vegetable Gardening. Mr. Scherrer. 202 M.H.
This subject is designed to give a working knowledge of the various phases of vegetable production. It includes a study of garden soils, germination and planting of seeds, selection of varieties with reference to the conditions of the state, construction and management of hot beds and cold frames, fertilizing, irrigation, packing and marketing of vegetables. For Agricultural Sophomores.
1 Lec., 1 Rec., 1 Lab. per week. 2d S.
53. Greenhouse Construction and Management.  
Mr. Scherrer.  202 M.H.

This subject aims to familiarize the student with modern methods of greenhouse work and the more important plants grown under glass. Sorts, varieties, culture, marketing, and enemies of greenhouse plants are studied. Each student is required to do practical work in propagating, potting, watering, and ventilating. A study is made of the history and development of different types of greenhouses, including methods of heating and general management. Required in Horticultural Course, Junior year. Elective in other Agricultural Courses.

1 Lec., 1 Rec., 1 Lab. per week. 1st S.

54. Practical Pomology.  
Asst. Prof. Wolff.  202 M.H.

A study of the fundamental problems of fruit growing, such as location, choice of site, kind and adaptability of soil for fruit growing, soil management, planting of orchards, pruning, sprays and spraying, thinning, harvesting and marketing. For Agricultural Sophomores.

2 Rec., 1 Lab. per week. 2d S.

55. Systematic Pomology and Commercial Orcharding.  
Prof. Gourley.  202 M.H.

The first eight weeks of the semester are devoted to a study of the leading varieties of fruits and their adaptations, with special reference to New England conditions. During the remainder of the semester this subject deals with the management of commercial orchards, problems of marketing, packing, transportation and cooperation. Special study is given to the experimental data on maintaining soil fertility in the orchard and on other fundamental factors in orchard management. In the laboratory special instruction is given to the packing of apples for market and judging fruit. Required in Horticultural Course, Senior year.

3 Rec., 1 Lab. per week. 1st S.

56. Landscape Gardening.  
Mr. Scherrer.  202 M.H.

A study of the principles involved in ornamental and landscape gardening. Special attention is given to the beautifying of home surroundings. Laboratory work consists in landscape design and practice in laying out and planting home and public grounds. Required in Horticultural Course, Junior year. Elective in other Agricultural Courses.

1 Lec., 1 Rec., 1 Lab. per week. 2d S.

57. Evolution and Improvement of Plants.  
Prof. Gourley.  202 M.H.

The applications of the principles of evolution to the improvement of plants. Variation, selection and heredity as applied to the problems
of plant breeding in agricultural practice. Required in Horticultural and General Agricultural Courses, Senior year. Elective in other Agricultural Courses.

Prerequisites—Botany 51 and 52.


A study of the methods of propagation and the care of trees, shrubs and perennial plants in the nursery. Lectures, reference readings and practice. Required in Horticultural Course, Junior year. Elective in other Agricultural Courses. 2 Rec., 1 Lab. per week. 2d S.

60. Floriculture. Mr. Macfarlane. 202 M.H.

A special study of the classification, history and development of the flowers and plants grown commercially and about the home, together with instruction and practice in their propagation and culture. Required in Horticultural Course, Junior year. Elective for others. Prerequisites—Botany 51 and 52. 1 Rec., 1 Lab. per week. 2d S.


A review of the important horticultural literature and methods of investigational work. Required in Horticultural Course, Senior year. Elective in other Agricultural Courses.

One seminar meeting per week. 2d S.

65. Advanced Horticulture. Prof. Gourley. 202 M.H.

Special work in horticulture. May be taken by special arrangement with the head of the department. Prerequisites will depend on the work taken. Elective for Horticultural and General Agricultural Seniors.

Two to five exercises per week. Time to be arranged. 1st S.


A continuation of Horticulture 65. Special arrangement must be made with the head of the department for this work. Elective for Horticultural and General Agricultural Seniors. Time and credit to be arranged.

Two to five exercises per week. 2d S.

68. Vegetable Forcing. Mr. Scherrer. 202 M.H.

A subject dealing with a study of special vegetables as grown under glass. Emphasis is placed upon the commercial phases of the work, including varieties, culture, style of packages, and marketing. Each student is required to grow crops from seeding to maturity. In addition, a study of systematic vegetable gardening is given. For Horticultural Juniors. Elective in other Agricultural Courses.

1 Lec., 2 Lab. per week. 2d S.
FOUR-YEAR COURSES.

LATIN.

ASST. PROF. WHITMAN.

1. Livy (Book I).
   Elective for Arts and Science students who have offered Advanced Latin for entrance.  
   Asst. Prof. Whitman.  102 T.H.  
   3 Rec. per week.  1st S.

2. Horace (Odes and Epodes).  
   Prerequisite—Latin 1.  
   Asst. Prof. Whitman.  102 T.H.  
   3 Rec. per week.  2d S.

MATHEMATICS.

ASSOC. PROF. MOORE, ASSOC. PROF. STECK, MR. BARTLETT.

51a. Algebra and Trigonometry.  
   I. Assoc. Prof. Moore.  211 T.H.  
   II. Assoc. Prof. Steck.  206 T.H.

   The first half of the semester is devoted to a brief review of fundamental principles, a more advanced presentation of linear and quadratic equations, followed by an introduction to the theory of equations, determinants, variation and logarithms. The second half of the semester is given to trigonometry. For Agricultural and Mechanic Arts Freshmen. Elective for Arts and Science Freshmen.*  
   4 Rec. per week.  1st S.

51b. Trigonometry and Analytic Geometry.  
   I. Assoc. Prof. Moore.  211 T.H.  
   II. Assoc. Prof. Steck.  206 T.H.

   The first ten weeks of this subject is devoted to plane and spherical trigonometry. During the remainder of the semester the student begins a study of the elements of plane analytic geometry. For Engineering Freshmen. Elective for Arts and Science Freshmen.*  
   4 Rec. per week:  1st S.

52. Analytic Geometry.  
   I. Assoc. Prof. Moore.  211 T.H.  
   II. Assoc. Prof. Steck.  206 T.H.

   A continuation of Mathematics 51b, which combines with analytic geometry a number of topics traditionally treated in college algebra that depend on or are closely associated with geometric representation. It presents the elements of both plane and solid analytic geometry. Cartesian and polar coordinates, the straight line, circle, and the conic sections; special emphasis placed on methods of analysis as illustrated by loci problems. For Engineering Freshmen. Elective for Arts and Science Freshmen.  
   Prerequisite—Mathematics 51b.  
   4 Rec. per week.  2d S.

* Arts and Science students who intend to take up the study of Analytic Geometry should elect Mathematics 51b and not Mathematics 51a.

The elements of solid and spherical geometry including original demonstrations and the solution of numerical problems. For Engineering and Mechanic Arts Freshmen. Elective for Agricultural and Arts and Science Freshmen. 2 Rec. per week. 1st S.

54. Surveying.

Recitations, field work and plotting; surveying with chain, compass, transit, sextant and plane table; adjustment, care and proper method of using these instruments; the methods of determining areas; levelling for profiles and contours; computing from field notes taken in connection with the work. For Agricultural and Mechanic Arts Freshmen. Elective for Arts and Science Freshmen. 5 Rec. per week for the first half of the semester. Two field exercises per week for the remainder of the semester.

55. Calculus.

Differentiation of algebraic and transcendental functions with applications to physical and allied problems. The simple methods of integration. For Engineering Sophomores. Elective for Arts and Science Sophomores. Prerequisite—Mathematics 52. 5 Rec. per week. 1st S.

56. Calculus.

A continuation of Mathematics 55, including the determination of length, area, volume, mass, mean density, center of gravity, etc., by the methods of the integral calculus. Prerequisite—Mathematics 55. 3 Rec. per week. 2d S.


Devoted to the study of ordinary differential equations, especially those of the first and second orders, with applications to geometry, physics, and mechanics. Offered in alternate years. Given in 1915–1916. Prerequisite—Mathematics 56. 2 Rec. per week. 1st S.


A study of some of the more advanced topics of differential and integral calculus with applications to the solution of problems. Elective for Juniors and Seniors who have completed Mathematics 56. Offered in alternate years. 2 Rec. per week. 2d S.
Comprises the general properties of polynomials and equations, the relation between the roots and coefficients with applications to the symmetric functions of the roots, the transformation of equations, the solution of cubic, biquadratic, binominal, and reciprocal equations, the properties of the derived functions, the limits and the separation of the roots, and the solution of higher numerical and transcendental equations. Offered in alternate years. Given in 1916–1917.
Prerequisite—Mathematics 56.  2 Rec. per week.  1st S.

60. History of Mathematical Science.  Assoc. Prof. Moore.  211 T.H.
Designed to acquaint those who intend to teach mathematics with the development of algebra, geometry, trigonometry, analysis and calculus. Lectures, assigned readings and recitations. Offered in alternate years. Given in 1915–1916.
Prerequisite—Mathematics 56.  2 Rec. per week.  2d S.

64. Theory and Practice of Surveying.  Assoc. Prof. Moore.  211 T.H.
Arranged for Seniors in the Mechanical and Electrical Engineering Courses, in which a study is made of the engineer's transit, wye-level, and compass; the theory of their adjustment and their use.
The field work includes: first, preliminary practice until a reasonable degree of facility and precision is attained by each student in doing well a piece of work such as; differential levelling, or a land survey involving the ordinary measurements of lines and angles; second, a topographic survey of a tract of land for a contour map; computation of earthwork "cuts and fills"; survey for highway line; locating survey of a proposed railway line, including practice in staking out simple curves; solar observations with the engineer's transit for azimuth.
1 Rec., 1 field exercise per week.  2d S.

Note.—Students desiring to take Mathematics 57, 58, 59, or 60 should consult with the instructor before registering.

MECHANICAL ENGINEERING.

PROF. PORTER, ASST. PROF. MCKONE.

51. History of Mechanical Engineering.  Prof. Porter.  2–45 D.H.
A brief history of the development of the steam engine and other mechanical inventions. Practical talk on engineering material, requirements and qualifications of an engineer. For Electrical Engineering or Mechanical Freshmen. Elective without credit.
1 Lec. per week last half of semester.  1st S.
52. Mechanics of Engineering. Prof. Porter. 2-45 D.H.
Principles of pure mechanics as applied to engineering structure involving composition forces, analytic and graphics. Conditions of equilibrium, center of gravity, moment of inertia, strength of materials, riveted joints. For Electrical and Mechanical Sophomores.
Mathematics 56 required as parallel course. 3 Rec. per week. 2d S.

58. Thermodynamics. Asst. Prof. McKone. 2-48 D.H.
A study of the laws of thermodynamics and the thermodynamic properties of steam and gases. Their application to steam, gasoline engines, theory of refrigeration, and injectors. Required for Electrical Engineering and Mechanical Engineering Juniors and Chemical Engineering Seniors.
Prerequisite—Mathematics 56. 3 Rec. per week. 2d S.

59. Mechanical Laboratory.
Prof. Porter, Asst. Prof. McKone. 0-24 D.H.
Physical tests of iron, steel, concrete, timber, calibration of instruments used in testing and efficiency of simple machines. For Electrical Engineering and Mechanical Engineering Juniors.
Prerequisite—Mechanical Engineering 52.
1 Rec., 1 Lab. per week. 1st S.

60. Mechanical Laboratory.
Prof. Porter, Asst. Prof. McKone. 0-24 D.H.
1 Rec., 1 Lab. per week. 2d S.

62. Hydraulics. Prof. Porter. 2-45 D.H.
The mechanics of liquids, principle of fluid pressures, stability of structures, flow of liquids, methods and measurement of streams, and quantities of water by means of floats, weirs and meters and the fundamental principles of hydraulic machinery. For Electrical Engineering and Mechanical Engineering Juniors.
Prerequisite—Mechanical Engineering 69. 3 Rec. per week. 2d S.

63. Materials of Construction. Prof. Porter. 2-45 D.H.
A study of the manufacture, properties and uses of iron, steel, brass, bronze, wood, brick, cement and concrete. For Electrical Engineering and Mechanical Engineering Juniors and Chemical Engineering Seniors.
Prerequisite—Mechanical Engineering 52. 3 Rec. per week. 1st S.
FOUR-YEAR COURSES. 117

64. Machine Design. Asst. Prof. McKone. 2-48 D.H.
Study of the elements of machines, design of fastening joints, gearing, belting, lubrication, machine frames and attachments. The work in the drafting room consists of the actual design of cranes, punches and machine parts. For Electrical Engineering and Mechanical Engineering Juniors.

Prerequisite—Mechanical Engineering 69.
2 Rec., 2 Lab. per week. 2d S.

65. Mechanical Engineering Laboratory.
Prof. Porter, Asst. Prof. McKone. 0-24 D.H.
Tests of gasoline and steam engine pumps, air compressors, boilers and a study of their operation. Continuation of Mechanical Engineering 60. For Electrical Engineering and Mechanical Engineering Seniors.
1 Rec., 1 Lab. per week. 1st S.

66. Mechanical Laboratory.
Prof. Porter, Asst. Prof. McKone. 0-24 D.H.
A continuation of Mechanical Engineering 65. For Mechanical Engineering Seniors.
1 Rec., 2 Lab. per week. 2d S.

68. Advanced Design.
Prof. Porter. 2-40 D.H.
Design of steam boiler plants and the lay-out of piping for the said plant. Selection of types of boilers and equipment for power plants. The lay-out and equipment for factories. For Mechanical Engineering Seniors.

Prerequisite—Mechanical Engineering 73. 3 Lab. per week. 2d S.

Prof. Porter. 2-45 D.H.
Principles of mechanics as applied to design of beams, columns, plain and reinforced concrete construction, principles of dynamics as applied to the design of fly wheels and moving parts of machines. For Electrical Engineering and Mechanical Engineering Juniors.

Prerequisite—Mechanical Engineering 52. 5 Rec. per week. 1st S.

Prof. Porter. 2-45 D.H.
A study of the purpose of manual training work, of the proper methods of teaching, and of the equipment of manual training schools. For Mechanic Arts Seniors.
1 Rec., 2 Lab. per week. 2d S.

73. Power Plant Engineering.
Prof. Porter. 2-45 D.H.
A study of fuels, theory of combustion, various types of boiler engines and prime movers, full equipment of power plants, and the design of chimneys and cooling towers for Electrical Engineering and Mechanical Engineering Seniors.

Prerequisite—Mechanical Engineering 58. 4 Rec. per week. 1st S.
74. Kinematics of Machinery. Asst. Prof. McKone. 2–45 D.H.

Study of mechanisms, location of virtual centers, construction of velocity and acceleration diagrams, design of gears and linkages. For Electrical Engineering and Mechanical Engineering Sophomores.

Prerequisite—Drawing 57. 2 Lab. per week. 2d S.

77. Valve Gears and Boiler Design. Asst. Prof. McKone. 2–40 D.H.

A study of various types of valves used in steam engines, the uses of Bilgram and Zeuner valve diagrams, the design of a Corliss valve gear, and the complete design of return tubular boilers. For Electrical Engineering and Mechanical Engineering Juniors.

Prerequisite—Mechanical Engineering 52. 2 Lab. per week. 1st S.

78. Industrial Engineering. Prof. Porter. 2–45 D.H.

A study of factory conditions, safety devices, sanitation, lighting, ventilation, fire prevention, methods of keeping costs and methods of supervision of factories. For Mechanical Engineering Seniors.

Prerequisite—Mechanical Engineering 73. 3 Rec. per week. 2d S.

79. Heating and Ventilation. Prof. Porter. 2–45 D.H.

Computation of air requirements, heat losses, design of heating and ventilation systems, location of apparatus, lay-out of piping, low pressure district heating systems. For Mechanical Engineering Seniors.

Prerequisite—Mechanical Engineering 64.

1 Rec., 2 Lab. per week. 1st S.

METEOROLOGY.

PROF. PETTEE.

1. Meteorology. Prof. Pettee. 206 T.H.

Recitations and lectures on wind systems, precipitation, humidity, laws of storms and tornadoes and methods of prediction of atmospheric changes. For Agricultural Seniors. Elective for Arts and Science students.

Prerequisite—A subject in physics. 2 Rec. per week. 1st S.

*MILITARY SCIENCE AND TACTICS.

LIEUT. SUTHERLAND.

Unless excused by proper authority, all male students are required to complete three years' satisfactory work in drill and two years' satisfactory work in theoretical military science.
Military Drill.

Drill includes practical instruction in the following subjects: close and extended order drills by company and battalion, advance and rear guards, outposts, marches, ceremonies, battalion review, parades and guard mounting, guard duty, calisthenics and gymnastics, rifle practice, first aid to the injured. The two exercises per week in Drill are counted as one credit hour.

1. Military Drill.  
   For Freshmen.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 1st S.

   A continuation of Drill 1. For Freshmen.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 2d S.

   For Sophomores.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 1st S.

   A continuation of Drill 3. For Sophomores.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 2d S.

5. Military Drill.  
   For Juniors.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 1st S.

   A continuation of Drill 5. For Juniors.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 2d S.

7. Military Drill.  
   Elective for Seniors only.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 1st S.

8. Military Drill.  
   A continuation of Drill 7. Elective for Seniors only.  
   Lieut. Sutherland. Armory.  
   2 Drill exercises per week. 2d S.

*Students who are excused from drill by competent authority are required to take additional work in some subject equivalent in hours to the military work from which they are excused.
Military Science.

LIEUT. SUTHERLAND.

Military Science includes theoretical instruction in the principles of the military profession and in the theory of the specific movements taught on the drill ground and in the field, the military policy and history of the United States, the principles of military discipline and the administrative duties of military officers.

1. Infantry Drill Regulations. Lieut. Sutherland. 105 Armory.
   Practical instruction and lectures. For Freshmen.
   1 Rec. per week. 1st S.

   Lieut. Sutherland. 105 Armory.
   Practical instruction and lectures. For Freshmen.
   Prerequisite—Military Science 1.
   1 Rec. per week. 2d S.

3. Field Service Regulations.
   Lieut. Sutherland. 105 Armory.
   Lectures and discussions covering advance and rear guards, outposts, patrol, etc. For Sophomores.
   Prerequisite—Military Science 2.
   1 Rec. per week. 1st S.

4. Field Service Regulations.
   Lieut. Sutherland. 105 Armory.
   A continuation of Military Science 3. Practical field work. For Sophomores.
   Prerequisite—Military Science 3.
   1 Rec. per week. 2d S.

5. Field Engineering and Hasty Intrenching.
   Lieut. Sutherland. 105 Armory.
   Lectures and practical work. Elective for Juniors.
   Prerequisite—Military Science 4, and open only to students who are taking Drill.
   1 Rec. per week. 1st S.

6. Military Map Reading and Sketching.
   Lieut. Sutherland. 105 Armory.
   Theoretical and practical work. Elective for Juniors.
   Prerequisite—Military Science 4, and open only to students who are taking Drill.
   1 Rec. per week. 2d S.

7. Army Regulations, Organization and Administration.
   Lieut. Sutherland. 105 Armory.
   Lectures and preparation of military papers. Elective for Seniors.
   Prerequisite—Military Science 4, and open only to students who are taking Drill.
   1 Rec. per week. 1st S.
FOUR-YEAR COURSES.

8. Army Regulations, Organization and Administration.
   Lieut. Sutherland. 105 Armory
   Prerequisite—Military Science 7, and open only to students who are taking Drill.
   1 Rec. per week. 2d S.

MINERALOGY.
   PROF. JAMES.

54. Mineralogy. Prof. James. 4 C.H.
   A short subject in blowpipe analysis, followed by laboratory practice in the determination and study of minerals, with special reference to their economic value. For Chemical Sophomores. Elective for Agricultural and Arts and Science Juniors.
   Prerequisites—Chemistry 51 and 52.
   2 Lab. per week. 2d S.

PHYSICAL CULTURE.
   MISS ROLLINS.

Unless excused by proper authority, all women students are required to complete three years' work in physical culture.

1. Physical Culture. Miss Rollins. 303 T.H.
   For Freshmen. Corrective gymnastics. Two exercises per week. 1st S.

2. Physical Culture. Miss Rollins. 303 T.H.
   For Freshmen. Gymnasium practice and aesthetic games. Folk dancing.
   Two exercises per week. 2d S.

3. Physical Culture. Miss Rollins. 303 T.H.
   For Sophomores. Practical gymnastics. Two exercises per week. 1st S.

4. Physical Culture. Miss Rollins. 303 T.H.
   Continuation of Physical Culture 3, folk dancing and aesthetic games.
   Two exercises per week. 2d S.

5. Physical Culture. Miss Rollins. 303 T.H.
   For Juniors. Advanced gymnastics, aesthetic, folk and interpretative dancing.
   Two exercises per week. 1st S.

6. Physical Culture. Miss Rollins. 303 T.H.
   For Juniors. Continuation of Physical Culture 5.
   Two exercises per week. 2d S.
7. Physical Culture. Miss Rollins. 303 T.H.
For Seniors. Classic dancing and continuation of Junior work.
Two exercises per week. Ist S.

8. Physical Culture. Miss Rollins. 303 T.H.
For Seniors. Continuation of Physical Culture 7.
Two exercises per week. 2d S.

PHYSICS.
PROF. FISHER, MR. MORAN.

Lectures, illustrated by experiments, with notebooks to be handed in at intervals and occasional written quizzes. As little mathematics is used as is consistent with the proper interpretation of the lecture experiments. For Agricultural and Mechanic Arts Sophomores. Elective for Arts and Science students.
Two Lec. per week. 1st S.

52. Magnetism and Electricity. Prof. Fisher. 2–46 D.H.
A continuation of Physics 51.
Two Lec. per week. 2d S.

Recitations on a standard textbook, with laboratory work, supplemented by occasional lectures.
Students electing this are advised to take analytics and calculus; the lack of them will prove a hindrance. For Mechanical and Electrical Sophomores; elective for Arts and Science students.
4 Rec., 2 Lab. per week. 1st S.

A continuation of Physics 53.
Prerequisite—Physics 53.
4 Rec., 2 Lab. per week. 2d S.

Similar to Physics 53, but more mathematical. For Chemical Juniors. Elective for Arts and Science students.
Prerequisite—Mathematics 52, 55 and 56.
4 Rec., 2 Lab. per week. 1st S.

A continuation of Physics 55.
Prerequisite—Physics 55.
4 Rec., 2 Lab. per week. 2d S.
FOUR-YEAR COURSES.


An elementary treatment, with illustrations drawn largely from the modern house; to begin in the fall of 1916–1917. For Home Economics Sophomores entering without high school physics.

1 Rec., 1 Lab. per week. 1st S.


A review of physics of elementary grade, for students who do not desire mathematical work, but need a study of principles, with laboratory applications. Mathematics 51 and Physics 51 and 52 must precede or accompany this. For Mechanic Arts Sophomores. Elective for Arts and Science students.

2 Rec., 1 Lab. per week. 2d S.

59. Elementary Optics and Photographic Instruments.

Mr. Moran. 2-46 D.H.

Designed for students who wish to use optical and photographic apparatus intelligently. Lectures on fundamental principles of light, images, color and photometry, and on practical visual, projection and photographic lenses and other apparatus; with experimental illustrations. (Not devoted to photographic chemistry, developers, etc.) Stencil notes will be used. Elective for all students, except Freshmen and Two Year students in the first year.

2 Lec. per week. 1st S.

61. Elementary Laboratory Optics.

Mr. Moran. 1-35 D.H.

Physical laboratory work designed to accompany Physics 59, which must precede or accompany this. Individual experiments, on which reports will be handed in.

2 Lab. per week. 1st S.

Note.—The following fees or deposits are required at the beginning of a year or part of a year: for notes, not returnable, Physics 51, 52–75c., Physics 59–40c.; for notes and damage, balance returnable at end of year, Physics 31, 57, 58, 61, 82,—$1.00; Physics 53, 54, 55, 56—$2.00.

Note.—Students desiring to be recommended as High School Physics teachers must pass with grade of 80 in Physics 51, 52, 55, 56, or with grade of 85 in Physics 51, 52, 53, 54.

POLITICAL SCIENCE.

PROF. SCOTT.


Recitations supplemented by the discussion of cases. Elective for Arts and Science and Mechanic Arts Juniors and Seniors and Agricultural Seniors.

3 Rec. per week. 2d S

Recitations, supplemented by a study of the decisions of the United States Supreme Court. Special attention is given to the connection between American constitutions and American political history. Elective for Arts and Science and Mechanic Arts Juniors and Seniors and Agricultural Seniors.

3 Rec. per week. 1st S.

PSYCHOLOGY.
PROF. SIMMERS.

52. Introduction to Psychology. Prof. Simmers. 102 T.H.

A rapid survey of the physiological bases of behavior, is followed by a more detailed study of the fundamental facts of mind or human behavior, chiefly as exhibited by the normal individual working under normal conditions. The principles of the science are related as closely as possible to the concrete experiences of the student.

Required of Manual Arts Sophomores and Agricultural Juniors. Elective for all other students. Must be taken by those who wish to elect other subjects in psychology. Lectures, assigned readings and discussion. Sophomore subject.

3 Rec. per week. 2d S.

53. Psychology of the Adolescent. Prof. Simmers. 102 T.H.

A study is made of the growth and development of the physical, psychic, intellectual, moral, social and religious nature of the adolescent boy and girl. The aim is to develop in the students a clearer insight into the nature of youth, particularly those of high school age, so they can be dealt with in a more sympathetic and helpful manner. Required of Manual Arts and Agricultural Seniors. Elective for all other students. Lectures, assigned readings and discussion. Junior subject.

Prerequisite—Psychology 52. 3 Rec. per week. 1st S.

SHOP WORK.

PROF. PORTER, MR. CAHILL AND MR. BATCHELDER.


Instruction in the use and care of wood working tools, and machinery in the wood shop, exercises in making joints of various types, and pattern making for Engineering Mechanic Arts Freshmen. Elective for Arts and Science Freshmen.

2 Lab. per week. 1st S.


Instruction in the care and use of wood working tools and machinery; making of simple joints and bench exercises. For Chemical Freshmen.

1 Lab. per week. 1st S.
FOUR-YEAR COURSES.

52. Wood Work. Mr. Batchelder. Second Floor of Shop.

Continuation of Shop 51. Is arranged to teach students taking Mechanic Arts Course, cabinet making, and its application to manual training. For Mechanic Arts Freshmen.

Prerequisite—Shop 51. 2 Lab. per week. 2d S.


Instruction in the care and use of tools in the carpenter shop, making of simple joints and frames, saw filing and the making of handles, single trees and other implements of wood used upon the farm. For Agricultural Sophomores.

2 Lab. per week. 1st S.

55. Forging. Mr. Cahill. First Floor of Shop.

This is a study of the forging of iron and steel and is designed to teach the operations of drawing, upsetting, welding, twisting, splitting and punching. A study is made of the construction, care and management of the forge and instruction given in tempering, case hardening and annealing. For Agricultural Sophomores.

1 Lab. per week. 1st S.

57. Forging. Mr. Cahill. First Floor of Shop.

This is a study of the forging of iron and steel and is designed to teach the operation of drawing, upsetting, welding, twisting, splitting, and punching. A study is made of the construction, care and management of the forge and instruction given in tempering, case hardening and annealing. For Electrical and Mechanical Sophomores.

2 Lab. per week. 1st S.


The use and care of wood turning tools and machinery, exercises upon wood turning lathes and cabinet making. For Mechanic Arts Sophomores.

Prerequisite—Shop 52. 2 Lab. per week. 1st S.

60. Wood Work. Mr. Batchelder. Second Floor of Shop.

Continuation of Shop 59. More complicated cabinet work and finishing same. For Mechanic Arts Sophomores.

3 Lab. per week. 2d S.


Exercises in bench work, chipping, filing and scraping and laying out of work from drawings; a study of cutting edges and tool adjustments best suited for different metals together with a study of cutting speeds and feeds. Practice in operating the principal machine tools, such as the shaper, lathe, drill press, planer and milling machine. For Electrical and Mechanical Sophomores. 2 Lab. per week. 2d S.
63. **General Machine Work.**  
Mr. Cahill. First Floor of Shop.  
A continuation of Shop 62. For Electrical and Mechanical Juniors.  
2 Lab. per week. 1st S.

64. **Manufacturing.**  
Mr. Cahill. First Floor of Shop.  
Construction and use of jigs and special fixtures; use of limit gauges, special tools, turret and screw machinery; manufacture of some simple machine, using special appliances. For Electrical Juniors. Elective for Mechanical Juniors.  
2 Lab. per week. 2d S.

65. **Wood Work.**  
Mr. Batchelder. Second Floor of Shop.  
This subject is laid out to teach students exercises that are suitable for subjects in manual training in secondary schools. For Mechanic Arts Juniors.  
3 Lab. per week. 1st S.

66. **Forge Work.**  
Mr. Cahill. First Floor of Shop.  
This is a study of the forging of iron and steel and is designed to teach the operation of drawing, upsetting, welding, twisting, splitting, and punching. A study is made of the construction, care and management of the forge and instruction given in tempering, case hardening and annealing. For Mechanic Arts Juniors.  
3 Lab. per week. 2d S.

68. **Machine Work.**  
Mr. Cahill. First Floor of Shop.  
Exercises in bench work, chipping, filing and scraping and laying out of work from drawings; a study of cutting edges and tool adjustments best suited for different metals together with a study of cutting speeds and feeds. Practice in operating the principal machine tools, such as the shaper, lathe, drill press, planer and milling machine. For Chemical Juniors.  
2 Lab. per week. 2d S.

69. **Advanced Shop Work.**  
Mr. Batchelder, Second Floor of Shop.  
Advanced pattern making and foundry practice for Mechanical Seniors.  
2 Lab. per week. 1st S.

70. **Advanced Shop Work.**  
Mr. Cahill. First Floor of Shop.  
Tool making. For Mechanical Seniors. 2 Lab. per week. 2d S.

71. **Machine Work.**  
Mr. Cahill. First Floor of Shop.  
Machine work arranged to meet the needs of students taking the Mechanic Arts Course for Teachers. For Mechanic Arts Seniors.  
2 Lab. per week. 1st S.

72. **Machine Work.**  
Mr. Cahill. First Floor of Shop.  
A continuation of Shop 71.  
3 Lab. per week. 2d S.
FOUR-YEAR COURSES.

SOCIOMETRY.

PROF. GROVES.


An elementary study of life of primitive man, the beginnings of human society and the factors that condition social evolution. The subject aims to introduce the student to a field of investigation of special value to the student of the social sciences. Special attention is given to the study of primitive social control. Ethnological readings are required.

The subject includes a discussion of the following topics: Geographical basis of human society, origin and antiquity of primitive man, races, race crossing, prehistoric culture periods, primitive life conditions including food, housing, inventions, slavery, art, dress, marriage, family forms and customs, totemism, tabu, magic, medicine men, ceremonies, secret societies, clan and tribal organization.

Special attention will be given to the theories of human association. Sophomore subject. Lectures and recitations. 3 Rec. per week. 1st S.

52. Social Pathology and Modern Philanthropy. Prof. Groves. 201 Lib.

This subject in modern social problems covers the following ground:

A. Study of the nature, origin and proper treatment of dependent, defective and delinquent classes, including an introduction to the theories of criminal anthropology.

B. Study of contemporary social problems and movements for social betterment as reported in The Survey.

C. Thesis work on the part of the student based upon first-hand study of some concrete social problem.

Junior subject. Students are advised to complete Sociology 51 before electing this subject. Lectures and recitations.

3 Rec. per week. 2d S.

*53. Mental Defectives. Prof. Groves. 201 Lib.

A sociological study of mental defectiveness with special attention to the problem of social prophylaxis. Designed for students who plan to engage in social or educational work of an administrative or institutional character or who plan to do graduate work in the field of psychology or sociology.

The subject covers the following ground:

A. The study of amentia, including a discussion of the number, causation, pathology, classification, characteristics, problem of diagnosis and prognosis and the treatment of aments.

B. The study of the constitution and function of the psychological clinic, method of classifying clinic cases, the Binet measuring scale, the sociological relations of the clinic.
C. Individual study by the student of typical cases of mental defec-
tiveness by the case method.
D. An introduction to the literature of amentia.
Junior subject. Lectures and recitations.
Prerequisites—Psychology 52 and Sociology 51.

3 Rec. per week. 1st S.

54. Rural and Community Sociology. Prof. Groves. 201 Lib.

A study of the social significance, conditions and resources of Ameri-
can country life with the purpose of developing community leadership.
The subject includes a discussion of the following:
A. Rural ethnology and sociology. Land basis of society, origin of
primitive agriculture, animal and plant life as factors in human progress,
modern agriculture and population, migration, immigration and city
drift.
B. Rural social psychology. Imitation and city influence, suggesti-
bility, conflict, discussion, public opinion and community pride.
C. Rural social pathology. Dependents, defectives and delinquents
in their relation to the country community, problem of rural police
protection, moral problems of the rural community.
D. Rural progress. Survey making, communication, community ad-
vertising, associations and clubs, rural education, wider use of rural
school houses, rural school gardens, community competition, fairs, recre-
ation, the rural church and welfare work.
Senior subject. Lectures and recitations. 3 Rec. per week. 2d S.

55. Social Psychology. Prof. Groves. 201 Lib.

A study of the development and the characteristics of the social mind
of man.
The subject covers the following ground:
A. The study in detail of the character and operation of the instincts,
sentiments and emotions of man of primary importance for his life in
society.
B. The study of the operation of the modern social mind, including
a discussion of suggestibility, the crowd, mob mind, fashion, conven-
tionality, custom-imitation, social conflict, discussion, public opinion
and problems of social control.
Junior subject. Lectures and recitations.
Prerequisite—Psychology 52. 3 Rec. per week. 1st S.

56. An Introduction to General Sociology. Prof. Groves. 201 Lib.

An advanced subject in the principles of sociology which aims to
introduce the student to a systematic sociological interpretation of

*Sociology 53 and 55 are given in alternate years. Sociology 53 is offered in 1916–
1917.
†Sociology 56 and 58 are given in alternate years. Sociology 56 is offered in 1916–
1917.
FOUR-YEAR COURSES.

human association. It includes a study of the history of sociological thought, discussions of sociological principles and recent sociological literature. This subject is the most advanced offered by the department and is especially provided for those who are specializing in the social sciences. Thesis work is required.

Senior subject. Lectures and recitations.
Prerequisite—Any two subjects in sociology. 3 Rec. per week. 2d S.

*58. Social Ethics. Prof. Groves. 201 Lib.

This subject in social ethics covers the following ground:
A. Origin and development of moral conceptions in savage society.
B. The study of representative altruistic thought of ethical significance.
C. The investigation by the seminar method of some ethical problem of importance in modern social life. The topic for 1915–1916 will be race prejudice and race friction.

Senior subject. Lectures and recitations.
Prerequisite—Any two subjects in sociology. 3 Rec. per week. 2d S.

SPANISH.
ASST. PROF. WHITMAN.

1. Elementary Spanish. Asst, Prof. Whitman. 102 T.H.

Elements of Spanish grammar. Reading of simple stories; conversation and dictation. Elective for Arts and Science students.
3 Rec. per week. 1st S.

2. A Continuation of Spanish 1. Asst. Prof. Whitman. 102 T.H.

Prerequisite—Spanish 1.
3 Rec. per week. 2d S.


Reading and translation, conversation, composition.
Prerequisite—Spanish 2.
3 Rec. per week. 1st S.

4. A Continuation of Spanish 3. Asst. Prof. Whitman. 102 T.H.

Prerequisite—Spanish 3.
3 Rec. per week. 2d S.

ZOÖLOGY.
PROF. JACKSON, MR. BATCHELDER, MR. BEAN.

The subjects in zoölogy are arranged in sequence as follows: Arts and Science students desiring a general scientific knowledge of the subject should elect from group A, B and D with optional elections in C. Stu-

* Sociology 56 and 58 are given in alternating years. Sociology 56 is offered in 1916–1917.
students who do not intend to specialize in zoology may elect from group A or B. Those students intending to teach the subject of zoology or who are contemplating entering the medical profession should consult the head of the department as to the sequence of subjects. However any subject offered may be taken by students who have completed the required prerequisites.

Group A. Systematic Zoology.

51. General Zoology.

Prof. Jackson, Mr. Batchelder, Mr. Bean. 212 T.H.

A detailed study of the fundamental principles of life; the nature and physiology of protoplasm; the structure of the cell and the processes of cell division. The structure and physiology of the tissues will be discussed and their occurrence in the different phyla of the animal kingdom. There will then follow a discussion of the different organs and systems of the body, their function and modification in the different types of animals. For Agricultural and Home Economics Freshmen. Elective for Arts and Science and Mechanic Arts Freshmen.

Prerequisite—Zoology 51. 2 Lec., 1 Lab. per week. 1st S.

52. General Zoology.

Prof. Jackson, Mr. Batchelder. 212 T.H.

The structure, habits, physiology and life history of the different types of animals will be discussed. The economic aspect will be emphasized so far as possible and their importance and relation to man. The laboratory work will consist of the study and dissection of type forms. For Agricultural and Home Economics Freshmen. Elective for Arts and Science and Mechanic Arts students.

Prerequisite—Zoology 51. 2 Lec., 1 Lab. per week. 2d S.

53. Faunal Zoology (Invertebrate).

Prof. Jackson. 212 T.H.

A study of the habits, life history and identification of local invertebrate animals exclusive of the insects. The study is entirely systematic and is primarily for students intending to teach zoology.

Prerequisites—Zoology 51 and 52. 1 Report, 2 Lab. per week. 1st S.

54. Faunal Zoology (Vertebrate).

Prof. Jackson. 212 T.H.

A study of the habits, life history and identification of local vertebrate animals exclusive of the birds. The student will be expected to become familiar with the majority of our local vertebrate animals. The work is primarily for students intending to teach zoology.

Prerequisites—Zoology 51 and 52. 1 Report, 2 Lab. per week. 2d S.
55. Systematic Entomology. Prof. Jackson, Mr. Batchelder. 212 T.H.

A laboratory subject consisting of the collection and identification of insects without regard to their economic importance. This is primarily for students of entomology. It is suggested that students electing this subject collect insects during the summer.

Prerequisites—Zoology 51 and 52. 1 Report, 2 Lab. per week. 1st S.

56. Ornithology. Prof. Jackson. 212 T.H.

A study of the classification, identification and economic importance of the birds. The object of the subject is to enable students to identify birds at sight and to become familiar with their economic importance.

Prerequisites—Zoology 51 and 52. 1 Lec., 2 field trips per week. 2d S.

Group B. Physiology, Hygiene and Sanitation.

58. Human Anatomy and Physiology.

Prof. Jackson, Mr. Bean. 212 T.H.

A detailed study of the structure, physiology and histology of the human body. The various physiological processes of the body will be discussed, particularly in regard to their bearing on general hygiene and sanitation. For Home Economics Freshmen, elective for Arts and Science Freshmen and Sophomores. Written reports and library assignments required.

Prerequisite—Zoology 51. 2 Lec., 1 Lab. per week. 2d S.

59. Hygiene and Sanitation. Prof. Jackson, Mr. Bean. 212 T.H.

A study of the fundamental principles of hygiene and sanitation. The nature of disease and method of maintaining the coördination of the body will be discussed, and practical methods of improving the efficiency of a human machine. For Home Economics students. Elective for Agricultural and Arts and Science Sophomores, Juniors and Seniors.

Prerequisite—Zoology 51. 2 Lec., 1 Lab. per week. 1st S.

60. Advanced Sanitation.

Prof. Jackson, Mr. Bean, Mr. Batchelder. 212 T.H.

A continuation of Zoölogy 59, dealing with various phases of industrial and home sanitation. The nature of wound infection, antiseptics and disinfectants, the ventilation of buildings, shops, etc., water supplies and other topics of a practical nature, will be discussed. Frequent written reports.

Prerequisites—Zoology 51 and 59. 2 Lec., 1 Lab. per week. 2d S.
61. Embryology. Prof. Jackson. 201 T.H.
A detailed study of vertebrate embryo, its method of development and the relation of the embryo to the parent. The laboratory work will be primarily with the frog and chick embryo. The lectures will include human embryology. Zoology 67, Histology, may be taken parallel with Embryology. 
Prerequisites—Zoology 51, 52, 57 and 67.
1 Lec., 2 Lab. per week. 1st S.

62. Advanced Neurology. Prof. Jackson, Mr. Bean. 201 T.H.
A study of the structure and physiology of the human nervous system. The laboratory work will consist of a study of the different types of neurons, the nature of nervous impulses and a detailed study of the nerve tract in the brain and spinal column. The subject is primarily adapted for students of psychology.
Prerequisites—Zoology 51 and 57. 1 Lec., 2 Lab. per week. 2d S.

Group C. Philosophical Zoology.

64. Evolution and Genetics. Prof. Jackson. 212 T.H.
Lectures dealing with the various problems of evolution heredity and eugenics. A detailed study of the mechanical basis of heredity and variation with the various theories of evolution, the factors of evolution, inheritance of human characteristics, heredity and disease and other practical problems will be discussed. For Home Economics Juniors. Elective for Agricultural and Arts and Science Juniors and Seniors. Written reports and reviews required.
Prerequisite—Zoology 51. 3 Lec. per week. 2d S.

Group D. Anatomical Zoology.

65. Comparative Anatomy of the Invertebrates. Mr. Batchelder. 203 T.H.
A detailed study of the structure of different types of invertebrate animals exclusive of insects. The subject is primarily for students intending to teach zoology.
Prerequisites—Zoology 51 and 52. 1 Report, 2 Lab. per week. 1st S.

Mr. Batchelder. 203 T.H.
A detailed study of the structure of different types of vertebrate animals. Primarily for students intending to teach zoology.
Prerequisites—Zoology 51 and 52. 1 Report, 2 Lab. per week. 1st S.
FOUR-YEAR COURSES.

67. Histology. Prof. Jackson. 203 T.H.
A detailed study of the structure of the tissues of vertebrate animals, cell specialization and the manner in which tissues are combined into organs. The subject is primarily for students intending to teach zoölogy and a great deal of attention will be paid to the technique of histology.

Prerequisites—Zoölogy 51, 52 and 57.

1 Report, 2 Lab. per week. 1st S.

68. Insect Anatomy. Mr. Batchelder. 203 T.H.
A study of the anatomy of different types of insects. Especially adapted for students in entomology.

Prerequisites—Zoölogy 51, 52 and 55. 1 Report, 2 Lab. per week. 2d S.

Group E. Advanced Zoölogy.

Arranged to suit the need of those who wish to specialize in zoölogy. This subject may not be elected except by students who have completed at least 18 hours in zoölogy or entomology with an average mark of at least 80 and then only on the presentation of the detailed outline of the problems they wish to study. The subject is primarily for graduate students. Open only to students by special permission.

Credit and hours to be arranged. 1st S.

70. Advanced Zoölogy. Prof. Jackson. 202 T.H.
A continuation of Zoölogy 69. The subject can only be elected under the above restrictions. Open only to students by special permission.

Credit and hours to be arranged. 2d S.

A discussion of the principles of teaching zoölogy and the application of zoölogy to other lines of work. Practical work will be under the direct supervision of the head of the department. Lectures will deal with the method of presenting the subject with the adaptation of the subject to meet the special requirements of high schools and colleges; methods of grading laboratory work and examination papers and general laboratory and class administration. The application of zoölogy to various government positions will also be discussed. Only students who have shown special proficiency in zoölogy may elect this subject. Open only to students by special permission.

1 Report, 2 Lab. per week. 1st S.

A continuation of Zoölogy 71. The subject can only be elected under the above restrictions. Open only to students by special permission.

1 Report, 2 Lab. per week. 2d S.
THE TWO-YEAR COURSE IN AGRICULTURE.

This course was established by the state legislature in 1895, and provides an opportunity to secure a training for their life work for those students who do not have the time, money or preparation to take a four-year college course. The course is especially arranged, and suited for the young, bright boys of the farm, who expect to make a business of some line of agricultural or horticultural work. Although it is open to students who have had no previous training on the farm, the entrance of such is not encouraged because of their lack of practical experience. By independent work and close application, however, inexperienced students sometimes pass the course with credit.

The year's work closes the middle of May, so as to enable the students to get home for the spring work on the farm or to accept other positions for the summer. This short school year also permits four months' time for those students who are dependent upon their own resources to earn money for the following year.

The courses of study and the classes of the two-year course are separate and distinct from those of the four-year courses. The work of the first year is largely preparatory, being a study of the sciences underlying agriculture, together with some elementary agricultural and horticultural work. The second year contains optional studies so that it is possible for students to specialize in animal husbandry, poultry, dairying, horticulture or forestry. Ten hours per week on the average are spent in practical work on the farm, in the barn, greenhouses, shops or forest.

Admission.—The course is open to those having a fair knowledge of reading, spelling, writing, arithmetic, English
Two-year course in agriculture.

Grammar, geography and history of the United States. Applicants under eighteen years of age, who do not present high school or other satisfactory certificates to show their proficiency in these subjects, may be given entrance examinations on Tuesday afternoon and Wednesday morning of the opening week of college. Applicants who are over eighteen years of age will be admitted without examination.

Expenses.—The expenses of the course will vary with the taste and frugality of the students and the kind of accommodations which they secure. The total average expense for the year, if the student holds a scholarship, is not far from $275. Many students by working for their board or room rent, or by doing various kinds of work about the college or village, are able to go through the year with a cash outlay not exceeding $150. However, as a rule, such students are either men of exceptional physical alertness, or those who are quick to seize opportunity.

Opening.—The course for the year will open Wednesday, September 13, 1916, and close Wednesday, May 16, 1917. A Christmas vacation of two weeks, and a spring vacation will be given.

Graduation.—No degree is given at the end of the course, but a certificate of graduation is issued upon its completion or the completion of its equivalent.

Students graduating from the two-year course must present to the dean of the agricultural division on or before the second Tuesday preceding their graduation satisfactory evidence of having had practical experience in farm work, either through having lived on a farm for at least two years subsequent to the age of 12 or through having worked on a farm for at least four months subsequent to the age of 15.

Students graduating from this course in 1917 must have at least 74 credit hours.
TWO-YEAR COURSE OF STUDY.
(For details, see description of studies, which follow.)

First Year.

First Semester.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany 31</td>
<td>3</td>
</tr>
<tr>
<td>Dairying 31</td>
<td>3</td>
</tr>
<tr>
<td>Drill 31</td>
<td>1</td>
</tr>
<tr>
<td>English 31</td>
<td>3</td>
</tr>
<tr>
<td>Horticulture 33</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 31</td>
<td>2</td>
</tr>
<tr>
<td>Military Science 31</td>
<td>1</td>
</tr>
<tr>
<td>Zoology 31</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Semester.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Husbandry 32</td>
<td>4</td>
</tr>
<tr>
<td>Botany 32</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 32</td>
<td>2</td>
</tr>
<tr>
<td>Drill 32</td>
<td>1</td>
</tr>
<tr>
<td>English 32</td>
<td>3</td>
</tr>
<tr>
<td>Entomology 32</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 32</td>
<td>2</td>
</tr>
<tr>
<td>Military Science 32</td>
<td>1</td>
</tr>
<tr>
<td>Shop Work 32</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Year.

First Semester.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 31</td>
<td>3</td>
</tr>
<tr>
<td>*Animal Husbandry 35</td>
<td>3</td>
</tr>
<tr>
<td>*Animal Husbandry 39</td>
<td>3</td>
</tr>
<tr>
<td>*Dairying 33</td>
<td>3</td>
</tr>
<tr>
<td>*Dairying 35</td>
<td>3</td>
</tr>
<tr>
<td>Drawing 31</td>
<td>1</td>
</tr>
<tr>
<td>Drill 33</td>
<td>1</td>
</tr>
<tr>
<td>*Forestry 53</td>
<td>4</td>
</tr>
<tr>
<td>*Horticulture 31</td>
<td>3</td>
</tr>
<tr>
<td>*Horticulture 35</td>
<td>3</td>
</tr>
<tr>
<td>Military Science 33</td>
<td>3</td>
</tr>
<tr>
<td>Physics 31</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 31</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective. Elective courses to make a total of at least 18 hours.
TWO-YEAR COURSE IN AGRICULTURE.

SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy 32</td>
<td></td>
</tr>
<tr>
<td>*Agronomy 34</td>
<td></td>
</tr>
<tr>
<td>*Agronomy 36</td>
<td>Field Crops 3</td>
</tr>
<tr>
<td>Animal Husbandry 34</td>
<td>Manures and Fertilizers 2</td>
</tr>
<tr>
<td>*Animal Husbandry 36</td>
<td>Farm Management and Accounting 3</td>
</tr>
<tr>
<td>*Animal Husbandry 38</td>
<td></td>
</tr>
<tr>
<td>*Animal Husbandry 40</td>
<td>Feeds and Feeding 3</td>
</tr>
<tr>
<td>*Dairying 32</td>
<td>Animal Diseases 3</td>
</tr>
<tr>
<td>*Dairying 34</td>
<td>Animal Breeding 2</td>
</tr>
<tr>
<td>Drill 34</td>
<td>Poultry 3</td>
</tr>
<tr>
<td>Economics 32</td>
<td>Market Milk 3</td>
</tr>
<tr>
<td>*Forestry 54</td>
<td>Cheese Making 3</td>
</tr>
<tr>
<td>*Horticulture 32</td>
<td>Military Drill 1</td>
</tr>
<tr>
<td>*Horticulture 34</td>
<td>Elementary Economics 3</td>
</tr>
<tr>
<td>Military Science 34</td>
<td>Forest Mensuration 3</td>
</tr>
<tr>
<td>Shop Work 34</td>
<td>Home Decoration 3</td>
</tr>
</tbody>
</table>

DESCRIPTION OF STUDIES.

AGRONOMY.

PROF. TAYLOR, ASST. PROF. PRINCE, MR. YOUNG,

31. Farm Engineering and Soils. 
   Asst. Prof. Prince. 110 M.H.
   This subject will include the mapping of farms, leveling for drains, a study of farm implements and of farm buildings; textbooks and recitations upon the formation, kinds and physical properties of soils. Practical exercises are given in map making, laying out drains, comparing farm machines, rope splicing and in physical experiments with soils.
   For Two-Year Students, Second Year.
   2 Rec., 1 Lab. per week. 1st S.

32. Field Crops. 
   Asst. Prof. Prince. 110 M.H.
   Lectures and recitations on the culture, uses and value of the field crops grown in New England. Laboratory practice will include seed testing, seed identification, corn and potato judging, hay judging and a study of the different legumes, grasses and grains.
   2 Lec., 1 Lab. per week. 2d S.

34. Manures and Fertilizers. 
   Prof. Taylor. 110 M.H.
   Textbook and recitations upon the constituents of farm manures and chemical fertilizers, the care and application of manures, the home-

* Elective. Elect courses to make a total of at least 18 hours.
mixing of fertilizers and the modifications required by different soils and crops. Elective for Two-Year Students, Second Year.

2 Lec. per week. 2d S.

36. Farm Management and Accounting. Mr. Young. 110 M.H.

Textbook, lectures, and recitations upon different types of farming, size of farms, cropping systems, live stock problems, marketing farm products, choice of a farm, and farm records and accounts. Practical work in laying out farms; keeping complete cost accounts on farms; analyzing and organizing the farm business. Elective for Two-Year Students, Second Year.

2 Lec., 1 Lab. per week. 2d S.

ANIMAL HUSBANDRY.

PROF. ECKMAN, ASST. PROF. MITCHELL, MR. FAWCETT.

32. Types and Breeds of Live Stock. Mr. Fawcett. 301 M.H.

Similar to Animal Husbandry 51. For Two-Year Students, First Year.

3 Lec., 1 Lab. per week. 2d S.

34. Feeds and Feeding. Prof. Eckman. 105 M.H.

Similar to Animal Husbandry 54. For Two-Year Students, Second Year.

2 Rec., 1 Lab. per week. 2d S.

35. Veterinary Anatomy. Mr. Fawcett. 105 M.H.

Similar to Animal Husbandry 55. Elective for Two-Year Students.

3 Rec. per week. 1st S.

36. Animal Diseases. Prof. Eckman. 105 M.H.


3 Rec. per week. 2d S.

38. Animal Breeding. Mr. Fawcett. 2 M.H.

A study of the principles and practices of animal breeding. Practice is given in tracing pedigrees. Elective for Two-Year Students, Second Year.

2 Rec. per week. 2d S.


Covers the subjects of poultry house construction, types and breeds of poultry, feeding, killing and dressing, eaponing, and equipment. Elective for Two-Year Students.

2 Rec., 1 Lab. per week. 1st S.


Covers the subjects of incubation, brooding, care of young stock, market poultry, poultry diseases, and poultry farm problems. Elective for Two-Year Students.

2 Rec., 1 Lab. per week. 2d S.
BOTANY.

PROF. BUTLER, DR. OTIS.

31. Elements of Botany. Dr. Otis. 206 N.H.
   Devoted to the study of how plants grow and how plants feed. For Two-Year Students, First Year. 1 Lec., 2 Lab. per week. 1st S.

32. Fungal Diseases of Plants. Prof. Butler, Dr. Otis. 206 N.H.
   The principal fungal diseases, their cure and prevention. For Two-Year Students, First Year. 1 Lec., 1 Lab. per week. 2d S.

CHEMISTRY.

MR. GRANT.

32. Elementary Applications. Mr. Grant. 204 C.H.
   An elementary study, with special reference to the elements of plant food, composition of fertilizers, elements subject to exhaustion in soils, etc. For Two-Year Students, First Year. 2 Rec. per week. 2d S.

DAIRYING.

PROF. RASMUSSEN, MR. WILSON, MR. AMBROSE.

31. Milk—Milk Testing. Mr. Wilson, Mr. Ambrose. 204 M.H.
   Lectures and recitations on the composition and properties of milk, the Babcock test, the lactometer, and the inspection of milk; value and methods of keeping records of dairy cows, cooperation in dairying. For Two-Year Students, First Year. 2 Lec., 1 Lab. per week. 1st S.

   A study of the value of milk as a food, the production and handling of market milk and of certified milk. Commercial milk inspection. Exercises will be given in the judging of milk and cream and in the scoring of dairies. Elective for Two-Year Students, Second Year. 2 Lec., 1 Lab. per week. 2d S.

   Comparative study of different systems of creaming and factors influencing the efficiency of the hand separator. A study of commercial starters, cream ripening, churning, marketing, and scoring of butter. Elective for Two-Year Students, Second Year. 2 Lec., 1 Lab. per week. 1st S.
Lectures and laboratory work covering the details of manufacture,
curing and marketing of the more important kinds of cheese. Elective
for Two-Year Students, Second Year. 2 Lec., 1 Lab. per week. 2d S.

Methods of bacteriological analysis of milk and its products; relation
of bacteria to milk and its products; and application of bacteriological
principles to the dairy industry. Open to a limited number of stu-
dents. Elective for Two-Year Students, Second Year.
1 Lec., 2 Lab. per week. 1st S.

**DRAWING.**
**PROF. HUDDLESTON, MR. LATON.**

31. Agricultural Drawing. Prof. Huddleston. 3–52 D.H.
A brief study in the use of drafting instruments, followed by the
drawing in plan of a model farm-stead with special study given to the
arrangement of buildings individually and collectively. For Two-
Year Students, Second Year. 1 drawing period per week. 1st S.

**ECONOMICS.**
**PROF. SMITH.**

32. Elementary Social Science. Prof. Smith. 201 Lib.
This will be a brief survey of the facts and principles of business
activity. Since our great economic problems are largely problems of
value, some time will be spent in considering the principles which deter-
mine the values of commodities, of land, of labor, and of capital. Money
and banking institutions, markets and marketing problems will also be
discussed. For Two-Year Students, Second Year.
3 Rec. per week. 2d S.

**ENGLISH.**
**PROF. RICHARDS, MR. ———.**

31. Grammar and Elementary Composition. Mr. ———. 205 T.H.
For Two-Year Students, First Year. 3 Rec. per week. 1st S.

32. Grammar and Composition. Mr. ———. 205 T.H.
For Two-Year Students, First Year.
Prerequisite—English 31. 3 Rec. per week. 2d S.
ENTOMOLOGY.

PROF. O'KANE, MR. CLEVELAND.

32. Principles of Economic Entomology.

Prof. O'Kane, Mr. Cleveland. 213 T.H.

The relation of the structure and classification of insects to methods of insect control. The preparation and application of insecticides. Spray machinery and appliances. For Two-Year Students, First Year.

3 Rec. per week. 2d S.

FORESTRY.

PROF. WOODWARD, MR. GAMASH.

32. Farm Forestry.

Prof. Woodward, Mr. Gamash. 301 M.H.

A study of the general principles of forestry with particular reference to the care and management of woodlots; the various methods of cutting and marketing; log scaling; estimating standing timber; protection of forests; seeding and planting; reproducing forests. For Two-Year Students, First Year.

1 Rec., 1 Lab. per week. 2d S.

HORTICULTURE.

PROF. GOURLEY, ASST. PROF. WOLFF, MR. SCHERRER.

31. Vegetable Gardening.

Mr. Scherrer. 202 M.H.

A study of the commercial methods of vegetable growing. Special attention is given to the home garden. Elective for Two-Year Students, Second Year.

1 Lec., 1 Rec., 1 Lab. per week. 1st S.

32. Home Decoration.

Mr. Scherrer. 202 M.H.

A study of ornamental trees, shrubs and flowers; their culture, proper arrangement and decorative value, with special reference to the home surroundings. Elective for Two-Year Students, Second Year.

1 Lec., 1 Rec., 1 Lab. per week. 2d S.

33. Fruit Growing.

Asst. Prof. Wolff. 202 M.H.

This subject embraces a study of commercial orcharding; each fruit is studied with reference to planting, cultivating, pruning, fertilizing, picking, packing, storing and marketing. For Two-Year Students, First Year.

1 Lec., 1 Rec., 1 Lab. per week. 1st S.

34. Orchard Problems.

Prof. Gourley. 202 M.H.

Dealing with the principal problems of farm orchards and commercial orchard management. This subject is designed to show the
application of the principles of fruit growing to practical conditions. Elective for Two-Year Students, Second Year.

1 Lec., 1 Lab. per week. 2d S.

35. Greenhouse Management. Mr. Scherrer. 202 M.H.
Combined lecture, demonstration and laboratory work in greenhouse management. Elective for Two-Year Students, Second Year.

1 Lec., 1 Rec., 1 Lab. per week. 1st S.

MATHEMATICS.

MR. YOUNG.

31. Practical Arithmetic. Mr. Young. 301 M.H.
A review of arithmetic with particular reference to decimal fractions, mensuration, and percentage, showing the application of these principles to the solution of practical farm problems. For Two-Year Students, First Year.

2 Rec. per week. 1st S.

MILITARY SCIENCE AND TACTICS.

LIEUT. SUTHERLAND.

Unless excused by proper authority, all male students are required to complete two years' satisfactory work in drill and two years' satisfactory work in theoretical military science.

Drill.

Drill includes practical instruction in the following subjects: close and extended order drills by company and battalion, advance and rear guards, outposts, marches, ceremonies, battalion review, parades and guard mounting, guard duty, calisthenics and gymnastics, rifle practice, first aid to the injured. The two exercises in drill count for one hour of credit.

For Two-Year Students, First Year. 2 Drill exercises per week. 1st S.

For Two-Year Students, First Year. 2 Drill exercises per week. 2d S.

33. Military Drill. Lieut. Sutherland. Armory
For Two-Year Students, Second Year.

2 Drill exercises per week. 1st S.
For Two-Year Students, Second Year.
2 Drill exercises per week. 2d S.

Military Science.
Practical instruction and lectures. For Two-Year Students, First Year.
1 Rec., per week. 1st S.

Lieut. Sutherland. 105 Armory.
Practical instruction and lectures. For Two-Year Students, First Year.
Prerequisite—Military Science 31. 1 Rec. per week. 2d S.

For Two-Year Students, Second Year.
Prerequisite—Military Science 32. 1 Rec. per week. 1st S.

34. Field Service Regulations. Lieut. Sutherland. 105 Armory.
Lectures on advance guards, outposts, etc. Continuation of Military Science 33. For Two-Year Students, Second Year.
Prerequisite—Military Science 33. 1 Rec. per week. 2d S.

PHYSICS.
PROF. FISHER, MR. MORAN.
Practical applications of important physical principles in mechanics and heat, including a study of steam and gas engines. For Two-Year Agricultural Students, Second Year. 2 Rec., 1 Lab. per week. 1st S.

Note.—A deposit of $1.00 is required at the beginning of the semester for notes and breakage; balance returned at end of year.

SHOP WORK.
MR. BATCHELDER, MR. CAHILL.
Exercises in carpenter work, joinery and framing. Bench exercises adapted to farm uses. For Two-Year Students, First Year.
1 Lab. per week. 2d S.

*Students who are excused from drill by competent authority are required to take additional work in some subject equivalent in hours to the military work from which they are excused.
34. Forging. Mr. Cahill. First Floor of Shop.

This is a study in the forging of iron and steel and is designed to teach the operation of drawing, upsetting, welding, twisting, splitting, and punching. A study is made of the construction, care and management of the forge and instruction given in tempering, case hardening and annealing. For Two-Year Students, Second Year.

1 Lab. per week. 2d S.

SOCIOLOGY.

PROF. GROVES, PROF. SIMMERS.

31. Elementary Social Science: Sociology and Rural Education.

Prof. Groves, Prof. Simmers. 201 Lib.

An elementary study of the social conditions, forces, and institutions of the rural and small communities, especially in the New England states. The purpose of this course is the development of a social basis for leadership and the fulfillment of the obligations of an educated citizenship in the country and village communities. The second part of the semester will be given up to a study of the problems of rural education and will be conducted by the head of the department of education. For Two-Year Students, Second Year.

3 Rec. per week. 1st S.

ZOOLOGY.

MR. BACTELDER.

31. Human Physiology and Hygiene. Mr. Batchelder. 212 T.H.

A study of the structure, physiology and care of the human body. Special attention will be given to the fundamental principles of zoölogy, the nature of parasitic and bacterial diseases and the means of prevention. For Two-Year Students, First Year. 3 Rec. per week. 1st S.
TWO-YEAR COURSE IN ELEMENTARY INDUSTRIAL ENGINEERING.

Because of the splendid results secured in the two-year course in Agriculture, the trustees have been encouraged to offer a two-year course in Elementary Engineering, beginning in the fall of 1915.

By this training, any young man, of somewhat mature years, who is interested in any form of mechanics and who desires to fit himself for a profitable position in the industries, will find opportunity to increase his efficiency and thus his earning power. The course is peculiarly adapted to those who have had more or less shop experience. Any young man who is ambitious, industrious and of good moral character, may well consider the advantages here offered.

This course will be offered to young men who are likely to enter the mills, factories and machine shops of the state; who will have to do with the practical problems of the telephone, gas engines, the application of water power and other industries. It is not intended to establish a trade school in any sense, but it is hoped that the fundamental principles of mechanics, developed in a practical way, will be of direct benefit to the students who take these courses. It will be the endeavor to provide an opportunity for wage earners to improve their efficiency and thereby better their own and the community’s well-being.

The greatest treasure which this country holds today is the undeveloped skill and vocational possibilities, not only of the thousands of our workers everywhere, but of the great army of youth who pass annually from the doors of our elementary schools to serve in the shop, the field and the office. It is highly important to provide some form of vocational training for every boy who can afford to spend even a year or two.

In the training we have in mind for the industrial workers of this state, the purpose is two-fold. First, to increase
the general intelligence of young workers and to lead them to understand better their social and civic duties. Second, to increase their industrial intelligence and skill and to develop capacity for advancement within a given trade where such opportunity exists, or where it does not, to prepare for some skilled and remunerative work in another line.

The course offered will be simple, practical and fundamental. It will endeavor by every proper means, to lay a foundation, broad in its character, and one that will bring to the student a knowledge of underlying principles. Those who will come to take this course will gain in manual skill and productive power; they will gather a certain store of industrial knowledge; but they will also, it is hoped, acquire a certain initiative, a power of construction that will add definitely to their earning power.

Who May Enter This Course and How.—These two-year courses will be open to any young man, sixteen years or more of age who has a knowledge of the ordinary subjects taught in the grades. No written examinations will be required.

The course the first year will include instruction in the industrial application of electricity, in industrial physics, in applied mechanics, in mechanical drawing, in shop work, in practical mathematics, in English, in military science and in American citizenship.

The second year will include instruction in the industrial application of electricity, in electric controlling devices, in electrical design, in shop work, in power plant design, in the economics of business enterprise, in military science and in sanitation and hygiene for self, home and shop.
## COURSES OF STUDY.

(For details, see description of studies which follow.)

### TWO-YEAR COURSE IN INDUSTRIAL ENGINEERING.

FIRST YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 81</td>
<td>Industrial Application of Electricity.</td>
</tr>
<tr>
<td></td>
<td>Recitation periods........ 2</td>
</tr>
<tr>
<td></td>
<td>Laboratory periods...... 1</td>
</tr>
<tr>
<td>Mechanical Engineering 81</td>
<td>Applied Mechanics.</td>
</tr>
<tr>
<td></td>
<td>Recitation periods........ 2</td>
</tr>
<tr>
<td></td>
<td>Laboratory periods...... 1</td>
</tr>
<tr>
<td>Drawing 81</td>
<td>Mechanical Drawing........ 2</td>
</tr>
<tr>
<td>Shop Work 81</td>
<td>Shop Work............. 3</td>
</tr>
<tr>
<td>Mathematics 81</td>
<td>Practical Mathematics.... 2</td>
</tr>
<tr>
<td>English 81</td>
<td>English.................. 3</td>
</tr>
<tr>
<td>Military Science 81</td>
<td>Military Science........ 1</td>
</tr>
<tr>
<td>Drill 81</td>
<td>Drill.................... 1</td>
</tr>
</tbody>
</table>

FIRST YEAR, SECOND SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 82</td>
<td>Industrial Physics.</td>
</tr>
<tr>
<td></td>
<td>Recitation periods........ 4</td>
</tr>
<tr>
<td></td>
<td>Laboratory periods...... 3</td>
</tr>
<tr>
<td>Drawing 82</td>
<td>Mechanical Drawing........ 2</td>
</tr>
<tr>
<td>Shop Work 82</td>
<td>Shop Work............. 3</td>
</tr>
<tr>
<td>Mathematics 82</td>
<td>Practical Mathematics.... 2</td>
</tr>
<tr>
<td>Military Science 82</td>
<td>Military Science........ 1</td>
</tr>
<tr>
<td>Drill 82</td>
<td>Drill.................... 1</td>
</tr>
<tr>
<td>Political Science 82</td>
<td>American Citizenship..... 2</td>
</tr>
</tbody>
</table>

SECOND YEAR, FIRST SEMESTER.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 83</td>
<td>Industrial Application of Electricity.</td>
</tr>
<tr>
<td></td>
<td>Recitation periods........ 2</td>
</tr>
<tr>
<td></td>
<td>Laboratory periods...... 1</td>
</tr>
<tr>
<td>Electrical Engineering 85</td>
<td>Electric Controlling Devices... 2</td>
</tr>
<tr>
<td>Electrical Engineering 87</td>
<td>Electrical Design........ 2</td>
</tr>
<tr>
<td>Shop Work 83</td>
<td>Shop Work............. 3</td>
</tr>
<tr>
<td>Electrical Engineering 89</td>
<td>Power Plant Design..... 3</td>
</tr>
</tbody>
</table>
### Economics 81
The Economics of Business Enterprise

Credit Hours: 3

### Military Science 83
Military Science

Credit Hours: 1

### Drill 83
Drill

Credit Hours: 1

#### SECOND YEAR, SECOND SEMESTER.

### Electrical Engineering 84
Industrial Application of Electricity.

- Recitation periods: 2
- Laboratory periods: 1

### Electrical Engineering 86
Electric Controlling Devices

Credit Hours: 2

### Electrical Engineering 88
Electrical Design

Credit Hours: 2

### Shop Work 84
Shop Work

Credit Hours: 3

### Electrical Engineering 90
Power Plant Design

Credit Hours: 3

### Military Science 84
Military Science

Credit Hours: 1

### Drill 84
Drill

Credit Hours: 1

### Physiology 82
Sanitation and Hygiene

Credit Hours: 3

---

### TWO-YEAR COURSE IN INDUSTRIAL MECHANICS.

#### FIRST YEAR, FIRST SEMESTER.

### Electrical Engineering 81
Industrial Application of Electricity.

- Recitation periods: 2
- Laboratory periods: 1

### Mechanical Engineering 81
Applied Mechanics.

- Recitation periods: 2
- Laboratory periods: 1

### Drawing 81
Mechanical Drawing

Credit Hours: 2

### Shop Work 81
Shop Work

Credit Hours: 3

### Mathematics 81
Practical Mathematics

Credit Hours: 2

### English 81
English

Credit Hours: 3

### Military Science 81
Military Science

Credit Hours: 1

### Drill 81
Drill

Credit Hours: 1

#### FIRST YEAR, SECOND SEMESTER.

### Physics 82
Industrial Physics.

- Recitation periods: 4
- Laboratory periods: 3

### Drawing 82
Mechanical Drawing

Credit Hours: 2

### Shop Work 82
Shop Work

Credit Hours: 3

### Mathematics 82
Practical Mathematics

Credit Hours: 2

### Military Science 82
Military Science

Credit Hours: 1

### Drill 82
Drill

Credit Hours: 1

### Political Science 82
American Citizenship

Credit Hours: 2
**SECOND YEAR, FIRST SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 83</td>
<td>Industrial Application of Electricity.</td>
</tr>
<tr>
<td>Mechanical Engineering 83</td>
<td>Applied Mechanics.</td>
</tr>
<tr>
<td>Mechanical Engineering 85</td>
<td>Elementary Machine Design.</td>
</tr>
<tr>
<td>Shop Work 83</td>
<td>Shop Work.</td>
</tr>
<tr>
<td>Economics 81</td>
<td>The Economics of Business Enterprise.</td>
</tr>
<tr>
<td>Military Science 83</td>
<td>Military Science.</td>
</tr>
<tr>
<td>Drill 83</td>
<td>Drill.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 84</td>
<td>Industrial Application of Electricity.</td>
</tr>
<tr>
<td>Mechanical Engineering 84</td>
<td>Applied Mechanics.</td>
</tr>
<tr>
<td>Mechanical Engineering 86</td>
<td>Elementary Machine Design.</td>
</tr>
<tr>
<td>Shop Work 84</td>
<td>Shop Work.</td>
</tr>
<tr>
<td>Military Science 84</td>
<td>Military Science.</td>
</tr>
<tr>
<td>Drill 84</td>
<td>Drill.</td>
</tr>
<tr>
<td>Physiology 82</td>
<td>Sanitation and Hygiene.</td>
</tr>
</tbody>
</table>

**SECOND YEAR, SECOND SEMESTER.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering 84</td>
<td>Industrial Application of Electricity.</td>
</tr>
<tr>
<td>Mechanical Engineering 84</td>
<td>Applied Mechanics.</td>
</tr>
<tr>
<td>Mechanical Engineering 86</td>
<td>Elementary Machine Design.</td>
</tr>
<tr>
<td>Shop Work 84</td>
<td>Shop Work.</td>
</tr>
<tr>
<td>Military Science 84</td>
<td>Military Science.</td>
</tr>
<tr>
<td>Drill 84</td>
<td>Drill.</td>
</tr>
<tr>
<td>Physiology 82</td>
<td>Sanitation and Hygiene.</td>
</tr>
</tbody>
</table>

**DESCRIPTION OF STUDIES.**

**DRAWING.**

**PROF. HUDDELESTON, MR. LATON.**

**81. Mechanical Drawing.**

This subject is intended primarily to develop power in the individual to express through drawing his ideas, particularly as they relate to industrial problems. To accomplish this, instruction will be given in free-hand lettering, in the use of drafting instruments, and in the explanation and study of systems of object drawing, including projection drawing as a study of the relation of different views of a given object; also of isometric drawing as a study in pictorial representation of machines and machine parts. The whole object is to give power of expression through the pencil and develop habits of exact thinking. For First Year Two-Year students in Industrial Mechanics and Industrial Electricity.  

*Two drawing periods per week.*  

1st S.
82. Mechanical Drawing. Mr. Laton. 3-52 D.H.

The object of this is to develop skill and power in the visualizing and sketching of machines and machine tools, such as the student uses in actual shop practice. The work will consist of definite instruction and continued practice in the making and the reading of shop and assembly drawings, tracings and blue prints, including a study of shop and drafting room methods. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. Prerequisite—Drawing 81. Two drawing periods per week. 2d S.

ECONOMICS.

PROF. SMITH.

81. The Economics of Business Enterprise. Prof. Smith. 204 Lib.

This subject will be a brief survey of the principles which underlie business activity. Its chief aim will be to show the dependence in business life of each member of society upon every other member and the problems which arise from that relationship. Such a study involves the various goals of economic activity and economic ideals. It makes necessary an understanding of the steps by which the world of industry has arrived at its present stage and the influence which natural conditions like climate and various natural resources have had upon that development. Since our great economic problems are largely problems of values, some time will be spent in considering the principles which determine the values of commodities, and of capital and labor, money and exchange. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 3 Rec. per week. 1st S.

ELECTRICAL ENGINEERING.

81. Industrial Application of Electricity. 1-29 D.H.

In the recitation periods, there will be studied the general principles of electricity and magnetism; the general principles involved in the wiring of buildings in order that electricity may be used for electric lighting, electric power and for other domestic purposes; a study will be made of the requirements of the National Board of Fire Underwriters in connection with electrical installations.

In the laboratory periods, actual experiments will be performed to illustrate the different types of electric wiring, including the use of the various electrical fittings and their proper installations; various experiments will be performed to illustrate in a practical way the general principles of electricity and magnetism as taken up in the
recitation periods. The laboratory periods will run parallel with the recitation periods and will give a student the actual practical applications of the different principles taken up. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

2 Rec., 1 Lab. per week. 1st S.

83. Industrial Application of Electricity. 1-29 D.H.

In the recitation periods, there will be described the principles of electric dynamos and motors, both direct and alternating current, the method of computing the size of feeders and transmission circuits; a practical study of measuring instruments, electrical safety devices, switches, wattmeters, etc.; simple switchboard construction and the method used in the care and operation of the switchboard equipment.

In the laboratory periods, actual experiments will be performed on dynamos and motors, both direct and alternating current, showing the method of connecting, operating and care of same; experiments will be performed to show the fall of potential on transmission circuits and feeders, also the use, adaptability and method of connecting in circuit various types of electrical measuring instruments. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

2 Rec., 1 Lab. per week. 1st S.

84. Industrial Application of Electricity. 1-29 D.H.

In the recitation periods, there will be studied the fundamental principles and operation of telephones, including bridging, series and intercommunicating types; a study of commercial testing for faults in dynamos and motors and other electrical devices and a practical study will be made of general repair work, including materials available for such work and the adaptation of these materials to different classes of repair work.

In the laboratory periods, experiments will be performed on the different types of telephones including the taking apart and putting together of every different part of the telephone including transmitter, receiver, induction coil, ringer, magneto, switches, etc.; actual practice will be given in repair work, winding of armatures, transformers, etc.; experiments will be arranged for testing out and locating faults in dynamos, motors, transformers, etc. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

2 Rec., 1 Lab. per week. 2d S.

85. Electric Controlling Devices. 1-29 D.H.

This subject will include a careful study of the various forms of electric controllers; automatic starters used in connection with motors; no voltage and no field release starting rheostats; overload devices, including circuit breakers, time relays, etc., for the protection of motors
and dynamos; remote controlling devices; methods and apparatus used for automatically stopping and starting motors at points remote from the motor, including the method of so connecting a pump to an electric motor that it will automatically start when the water in the tank has fallen to a certain level and will automatically stop when the water has reached a certain level. For Second Year Two-Year Students in Industrial Electricity. 2 Rec. per week. 1st S.

86. Electric Controlling Devices. 1-29 D.H.

This subject will include a careful study of the so-called Tirrell regulators used for automatically keeping the supply voltage constant, including regulators that are adapted for direct current generators and also adapted to alternating current generators, both single phase and polyphase; induction feeder regulators for producing constant voltage on an alternating current feeder when the supply voltage varies between quite wide limits; the principle and operation of mercury arc rectifiers; Murphy electricity rectifiers; the principle and care of electric storage batteries and their application to industrial service; principle and care of transformers, both constant potential and constant current types, and their application to industrial service. For Second Year Two-Year Students in Industrial Electricity. 2 Rec. per week. 2d S.

87. Electrical Design. 1-28 D.H.

Under this subject there will be studied some of the fundamental and general principles upon which various electrical apparatus operate, such as controlling devices, rheostats, resistances, arc lamps, incandescent lamps, regulators, switches, circuit breakers, storage batteries, starting devices, etc. These various devices will be examined, taken apart and put together again, in order to see the actual methods of construction, the principles upon which each part operates and the relation of the parts. For Second Year Two-Year Students in Industrial Electricity. 2 Lab. per week. 1st S.

88. Electrical Design. 1-28 D.H.

Under this subject principles will be developed by means of which it will be possible to figure out resistances, rheostats, switches, electromagnets, electric controlling devices, etc. For Second Year Two-Year Students in Industrial Electricity. 2 Lab. per week. 2d S.

89. Power Plant Design. 1-29 D.H.

Under this subject there will be studied the equipment of an ordinary power house from a practical standpoint, special study being given to so-called isolated plants adapted for private use or for community use; the best choice of electrical machinery to meet different conditions; the relation between the various parts of the equipment, including
boilers, engines, switchboards, controlling devices, pumps, injectors and other auxiliaries; the operation and care of the equipment; the application and the adaptation in certain cases of fuel oil engines, gasoline engines, gas engines, water wheels as prime movers for operating electric dynamos for the generation of current. For Second Year Two-Year Students in Industrial Electricity.

2 Rec., 1 Lab. per week. 1st S.

90. Power Plant Design. 1–29 D.H.

Under this subject, there will be studied the principles and the practical features in design for hydro-electric developments, including some practical methods of measuring the flow of water, method of constructing dams and methods of measuring amount of power available in a stream; the design and construction of transmission lines, including various materials and supplies available for same; the care of pole line equipment, including the preservation of the poles themselves; the care of transformers, lightning arresters and other devices. For Second Year Two-Year Students in Industrial Electricity.

2 Rec., 1 Lab. per week. 2d S.

ENGLISH.

ASST. PROF. SCUDDER.

81. English. Asst. Prof. Scudder. 208 T.H.

The purpose of this subject is to teach self-expression. The man who is unable to present his thoughts clearly in speech or writing is greatly handicapped. Technical skill is robbed of its usefulness to him, because when he talks, he misrepresents himself. Men who hear him, unavoidably, if sometimes wrongly, mark him as lacking in intelligence. This study in English is to teach the student how to make others appreciate him. It is to teach him how to get full value for the skill and intelligence that may be his. It is to enable him to establish correct relations with his fellows.

The work will consist of written and oral exercises. The instruction will not be a drill in formal grammar, but will be an attempt in a practical way to develop the use of correct speech. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

3 Rec. per week. 1st S.

MATHEMATICS.

ASSOC. PROF. STECK.


Special emphasis will be placed on the solution of practical problems related to industrial work. The instruction will include a review of the
fundamental principles of arithmetic; the use of simple formulas; the use of cross-section paper for graphical representation, etc. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

82. Mathematics. Assoc. Prof. Steck. 206 T.H.

Instruction will be given in the solution of plane triangles; simple geometrical construction; useful applications of algebra, etc. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.

2 Rec. per week. 1st S.

MECHANICAL ENGINEERING.

PROF. PORTER.


The recitation periods will be devoted to lectures on the properties, commercial forms and methods of manufacture of the materials most used in engineering, such as wrought iron, cast iron, steel, brass, bronze and cement.

During the laboratory periods experiments will be made to determine the yield point, the breaking load per square inch, elongation and reduction of area of samples of material such as cast iron, wrought iron and steel. Experiments will be made on the compressive and tensile strength of cement. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 2 Rec., 1 Lab. per week. 1st S.


In the recitation periods there will be studied steam boilers, types of steam boilers, fire tube boilers, water tube boilers, boiler calculations, stays and stayings, heat and work, properties of steam, fuels, methods of firing, smokeless combustion of fuel, settings, pipings and boiler fittings, boiler accessories, inspection and care of boilers, types of steam engines, selection of types, rotative speed, piston speed, mean effective pressure, steam engine indicators, calculation of horse power, condensers and pumps, feed water heaters and economizers.

During the laboratory periods exercises will be given on valve setting, tests of steam boilers and engines, tests of auxiliary apparatus and pumps. These exercises will be carried on so as to illustrate by practical application the principles taught during the recitation periods. For Second Year Two-Year Students in Industrial Mechanics.

3 Rec., 2 Lab. per week. 1st S.

84. Applied Mechanics. Prof. Porter. 2-48 D.H.

During the recitation periods studies will be made of gas engines, gas engine cycles, types of gas engines, methods of governing, methods of
ignition, carburetors, gasoline and oil engines, natural gas, artificial gas and producer gas.

The laboratory periods will be devoted to tests on gas engines. For Second Year Two-Year Students in Industrial Mechanics.

4 Rec., 1 Lab. per week. 2d S.


Including rivets and rivet joints, screw threads and bolts, keys and coppers, journals, crank pins and collar bearings, axles and shafts, tooth gearing, belts and pulleys. Instruction includes practice in sketching, designing and making working drawings of machine details, the use of formulas and handbooks. For Second Year Two-Year Students in Industrial Mechanics.

2 Lab. per week. 1st S.


The complete design of some simple machine, including calculation on the strength of the different parts and the making of complete working drawings. For Second Year Two-Year Students in Industrial Mechanics.

1 Rec., 2 Lab. per week. 2d S.

MILITARY SCIENCE AND TACTICS.

LIEUT. SUTHERLAND.

Unless excused by proper authority, all male students are required to complete two years' satisfactory work in drill and two years' satisfactory work in theoretical military science.

Military Drill.

Drill includes practical instruction in the following subjects: close and extended order drills by company and battalion, advance and rear guards, outposts, marches, ceremonies, battalion review, parades and guard mounting, guard duty, calisthenics and gymnastics, rifle practice, first aid to the injured.


For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 2 Drill exercises per week. 1st S.

82. Drill. Lieut. Sutherland. Armory.

For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 2 Drill exercises per week. 2d S.


For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 2 Drill exercises per week. 1st S.
NEW HAMPSHIRE COLLEGE.

84. Drill.  
Lieut. Sutherland.  Armory.  
For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity.  
2 Drill exercises per week.  2d S.

Military Science.

81. Military Science.  
Lieut. Sutherland.  105 Armory.  
Practical instruction and lectures.  For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.  
1 Rec. per week.  1st S.

82. Military Science.  
Lieut. Sutherland.  105 Armory.  
Manual of guard duty and small arms firing regulations. Practical instruction and lectures. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity.  
Prerequisite Military Science 81.  
1 Rec. per week.  2d S.

83. Military Science.  
Lieut. Sutherland.  105 Armory.  
Field service regulations. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity.  
Prerequisite Military Science 82.  
1 Rec. per week.  1st S.

84. Military Science.  
Lieut. Sutherland.  105 Armory.  
Field service regulations. Lectures on advance guards, outposts, etc. A continuation of Military Science 83. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity.  
Prerequisite Military Science 83.  
1 Rec. per week.  2d S.

PHYSICS.

PROF. FISHER.

82. Industrial Physics.  
Prof. Fisher.  1–35, 1–37 D.H.  
Devoted to the applications of scientific principles of mechanics and heat to practical uses. The mathematics needed are of the simplest, and particular attention is paid to good ways of calculating. Problems in large numbers are used for the illustration of the principles, and practice in the use of scientific instruments and in the experimental illustration of principles is given in the laboratory.  
The work will include the laws of water pressure in pipes, tanks, etc.; the principle of work, and the efficiency of ideal and actual levers, pulleys, screws and their combinations; the laws of gas pressure,  

*Students who are excused from drill by competent authority are required to take additional work in some subject equivalent in hours to the military work from which they are excused.
barometers, siphons, pumps, balloons; kinetic and potential energy of moving, falling and rotating bodies, pendulums, clocks, projectiles, flywheels, the hydraulic ram, etc.; elasticity and springs; temperature and thermometers, expansion and contraction, the measurement of heat, boiling, freezing, the properties of steam, combustion, heat conveyance, pipes and lagging, the relation of heat and work, heat engines. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 4 Rec., 3 Lab. per week. 2d S.

Note.—A deposit of $1.00 is required at the beginning of the semester, for notes and breakage; balance returned at end of year.

PHYSIOLOGY.

PROF. JACKSON.

Physiology 82. Sanitation and Hygiene. Prof. Jackson. 212 T.H.

The purpose of this subject is to increase and maintain the efficiency of the human machine. With this in view, it will deal with the following:

(a) Sanitation of the Home. There will be discussed proper and improper sewage disposal; water supply; ventilation and other conditions of the home calculated to spread or favor the development of disease.

(b) Shop Sanitation. A discussion of the spread of bacterial diseases through improper shop sanitation. The effect of dust and other waste material on the health of the workmen and the importance of sunlight and proper ventilation.

(c) Personal Hygiene. A discussion of clothing, proper food, both mental and physical exercise, and other matters of personal hygiene.

(d) First aid treatment of injuries received in shop work will be considered, including the prevention of wound infection, permanent treatment of minor injuries and temporary treatment of major injuries pending the arrival of a physician.

Private conferences are solicited with students on any special problem of Hygiene and Sanitation. For first year two-year students in Industrial Mechanics and Industrial Electricity. 3 Rec. per week. 2d S.

POLITICAL SCIENCE.

82. American Citizenship. 202 Lib.

This subject will proceed on the theory that a proper and necessary equipment for life includes training in the fundamental principles of
good citizenship. The broad principles of the national constitution will be considered, together with a brief study of the constitution of New Hampshire. The subject, however, will be concerned chiefly with practical illustrations of the duties of citizenship and the relationship of man to man. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 2 Rec. per week. 2d S.

SHOP.

MR. BATCHELDER, MR. CAHILL.


Practice in the use of wood working tools; laying out work from drawings, mortising and framing; bench work and joinery; wood turning; the use of band and circular saws and wood planer. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 3 Lab. per week. 1st S.

82. Shop Work. Mr. Batchelder. Second Floor of Shop.

Exercises in the construction of solid, split and loose piece patterns and core boxes, such as are found in ordinary practice in commercial pattern shops; practice in floor and bench moulding with different kinds of moulding sand, setting of cores and risers, methods of gating and venting, charging and managing the cupola. For First Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 3 Lab. per week. 2d S.

83. Blacksmithing. Mr. Cahill. Forge Shop.

This is a study in the forging of iron and steel and is designed to teach the operations of drawing, upsetting, welding, twisting, splitting and punching. A study is made of the construction, care and management of the forge and instruction given in tempering, case hardening and annealing. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 3 Lab. per week. 1st S.


Exercises in bench work, chipping, filing and scraping and laying out of work from drawings; a study of cutting edges and tool adjustments best suited for different metals together with a study of cutting speeds and feeds. Practice in operating the principal machine tools, such as the shaper, lathe, drill press, planer and milling machine. For Second Year Two-Year Students in Industrial Mechanics and Industrial Electricity. 3 Lab. per week. 2d S.
THE WINTER SHORT COURSES IN AGRICULTURE.

The college offers these short courses for the purpose of affording an opportunity for the boys, the young men, and the older men and women on the farms of our state to acquaint themselves with the latest and most approved principles and practices of agriculture. Since many of our farm people find it impossible to leave their homes during the spring, summer and fall months, these courses are given during the winter when most people can find time to slip away for at least a week.

There is no longer any question concerning the value of practical scientific training for those who are engaged in farming. The increasing interest in agricultural work, the higher prices of farm products and the keener competition in all lines of production is making an education and training more and more a necessity for the people on our farms. It is hoped that these “short courses” will open an additional avenue through which the college may prove its value and usefulness to the farmers of the state.

Admission.—The short courses are open to everybody over 16 years of age. They are arranged especially for the farmer, his son, his daughter, and his wife. There are no examinations.

OUTLINES OF THE COURSES.

Hay and Forage Crops.—This is the first course and will begin Monday afternoon January 8, and close Saturday noon, January 13.

Hay and forage crops to the amount of nearly eight million dollars are grown annually in New Hampshire. These crops not only greatly exceed all others in acreage but are the most valuable of all farm crops produced. It seems fitting, therefore, that a special course of instruction should be offered to those who are primarily interested in this line of crop production.
Orcharding.—This course will follow the one on Hay and Forage Crops, and will begin Monday afternoon, January 15.

Each year problems are arising in better methods of handling our orchards. Every new season teaches its lessons and the past one has been no exception. The excessive rainfall has impressed all growers that more thorough spraying will be necessary in order to secure clean fruit which can be packed as fancy grades.

During this week not only the fundamental problems in handling the apple orchard will be discussed, but also the peach orchard in New Hampshire, as well as small fruits and vegetables.

Poultry.—A whole week will be devoted to the course in Poultry which will begin Monday afternoon, January 22.

The poultry industry is a branch of agriculture which is particularly well adapted to New Hampshire. In 1910 the value of poultry and eggs produced on New Hampshire farms amounted to about $2,900,000. The importance of this branch of agriculture as a money producing crop has not yet been recognized by most farmers in the state.

The demand for poultry products, both winter and summer, is a large and increasing one in New Hampshire. About 90 per cent of the poultry products consumed in New England are imported, and as a result there is a large demand for home-grown products.

Farm Management and the Woodlot.—This course will begin Monday afternoon, January 29.

The term "farm management" is intended to cover what might be called the "business side of farming." Statistics show that the yearly net income of many farmers is less than the wages of a hired man. There are good systems of farm management and bad systems. In this course the things which control profits in farming, different systems of management and methods of business will be discussed.

There are many advantages in having a woodlot on every New Hampshire farm. In the first place it furnishes winter
work at a time when teams and men are apt to be idle. Secondly, the material from the lot can be used for general building purposes, fence repair, and for fuel. In this way, the expenses of the farm can be reduced, since it is much cheaper to log the material from your own lot than to buy it and pay some one else for getting it out for you.

On account of favorable growth conditions it is possible to grow more timber per acre per annum in New England than in any other section of the country except the Pacific Coast region. In the white pine, red pine, Norway spruce, and white ash, New Hampshire has tree species which can be counted on to resist insect and fungus attack, grow rapidly, and mature at a much earlier period than is possible with most tree species. The combination of good markets and rapid growth makes it therefore advisable to grow timber on every portion of the farm that is not more suitable for tillage.

**FARMERS’ WEEK.**

The ninth annual Farmers’ Week will begin *Tuesday, January 2*. A special program of the exercises during the week will be issued during the holidays, a copy of which will be sent to any one upon request.

This course is designed to meet the needs of the everyday practical farmer and his wife who cannot leave home for more than a few days, but who wish to get some new ideas concerning the latest and best methods of farm, orchard and dairy operations and of household work.

Meetings of various state organizations will be held during the week in connection with the regular program.

**DAIRY COURSE.**

The twenty-second annual Dairy Course will open *Monday, February 5*, and will close *Friday, March 9*.

Students expecting to take this course should present themselves at the Registrar’s office in Thompson Hall on the opening day. Lectures and laboratory work will begin on the day following.
Instruction in Dairy Practice.—Instruction in the Dairy Course is given by lectures, recitations and by laboratory work in the barn, dairy and creamery. The equipment in the dairy building is such that the laboratory work can be made applicable both to farm and factory conditions. The student will have an opportunity to study the construction and efficiency, and the operation of the various machines used in handling of milk and making of butter. The use of the Babcock test in apportioning the money value of milk is regulated by state law. The importance of the test in the successful improvement of the dairy herd is becoming more and more apparent. The details of the test will be studied, and the student will practice testing milk, cream, skim-milk and buttermilk until fully competent to perform the work either for himself or for others.

The course in every respect is made as practical as possible and the instruction is planned to meet the needs of two classes of students: first, buttermakers, second, dairymen and milk producers.

Opportunities in Dairy Work.—The need of competent trained dairymen is greater than ever before. There is an increasing demand for first-class dairy products, such as butter, cheese, and condensed milk, and the making of these calls for first-class dairymen. The continuous campaign for pure milk in our cities is constantly opening up new positions for milk inspectors, and for men with training who can successfully manage dairy farms and care for the herd so as to produce sanitary milk economically. It also opens positions for men who are capable of operating milk depots and other dairy establishments. The organization of cow-test associations is opening up a new field for dairy workers. Although the college does not guarantee to find positions for those registered in the course it has opportunities to recommend students for a large number of positions. Inquiries for competent men are received throughout the year and thus far the College has been
unable to supply men for all the places it has been asked to fill.

**Equipment.**—The New Hampshire College with its new dairy building offers excellent opportunities for giving instruction in practical dairy work.

Entirely new equipment has been installed in the college creamery, each piece of machinery being run by an individual electric motor. In addition to the milk obtained from the college herd, the creamery receives milk and cream from about forty farms. By this arrangement sufficient milk for practical work is furnished at all times. The farm dairy is equipped with the leading kinds of hand separators and hand as well as small-power churns suitable for private dairies. The milk-testing and milk inspection laboratory is equipped with Babcock testers, sediment testers, acid-meters, and other apparatus necessary for inspection of milk and cream both as to fat content and other qualities. The creamery also contains bacteriology laboratories, a lecture room, offices, a reading room and an up-to-date milk bottling plant.

**Dairy Cattle.**—Representatives of the Jersey, Guernsey, Ayrshire and Holstein breeds are owned by the college and are used to acquaint the students with the different breeds and types of dairy cattle.

**Prizes.**—Through the courtesy of Mr. Thomas Jones Davis of Duluth, Minnesota, three suitable prizes will be given to students who rank the highest in judging dairy cattle of the different breeds.

**Expenses.**—Tuition in the short courses is free to residents of New Hampshire. Non-residents will pay a tuition fee of $2 for each of the one-week courses and $10 for the dairy course. Board and room will cost between $5 and $6 per week. Other expenses, including books, need not exceed a total of $5, although an allowance of $10 for the purchase of books to be taken home would be a good investment.
DAIRY CATTLE.

PROF. ECKMAN, MR. FAWCETT.

Animal Husbandry 42. Breeds and Breeding.

Lectures and recitations upon the origin, history, characteristics, and adaptability of the breeds of dairy cattle. The practical work will consist of scoring and judging the various breeds, and in tracing pedigrees of animals in the herd books.

*Two lectures and one judging period per week.*

Animal Husbandry 44. Diseases of Cattle.

This subject will consist of lectures and recitations upon the anatomy and physiology of the cow, with special reference to the digestive, reproductive and milk-producing organs. The common diseases, their causes and the methods of treatment will be discussed.

*Three exercises per week.*


Lectures and recitations upon the composition and digestibility of feeding stuffs. A detailed study of the different grains and feeds, and their value in a dairy ration. Practice will be given in computing and mixing rations for the dairy cow, and in fitting animals for the show ring.

*Three exercises per week.*
NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION.

Most of the agricultural experiment stations of the various states, including that of New Hampshire, were founded in 1888 by an act of congress, approved March 2, 1887, known as the Hatch Act, in honor of its author. This act appropriated fifteen thousand dollars ($15,000) annually for the maintenance of an agricultural experiment station in each state. This act provides:

“That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories.”

The act also provides that the results of such work shall be published in bulletins and reports.

A further endowment of the experiment stations to provide specifically for research work was made by the Adams Act, passed by congress and approved March 16, 1906, which provided an increased annual appropriation which
now amounts to $15,000 each year. This appropriation is specifically limited to the "necessary expenses of conducting original researches or experiments," and the rulings of the United States Department of Agriculture, which is vested with the supervision of the expenditures under this act, require that this appropriation be spent in fundamental investigations or researches to determine the underlying causes and principles of agricultural science, rather than for mere experiments to secure results of immediate practical application as contemplated under the Hatch Act appropriation. The purposes of the two acts are, therefore, supplementary but distinct.

The New Hampshire Agricultural Experiment Station is organized as a department of the New Hampshire College of Agriculture and the Mechanic Arts, and is administered by a board of control, elected by its board of trustees.

The publications of the station comprise 177 bulletins of the regular series and 17 circulars, 9 technical bulletins, 8 scientific contributions, and 4 school bulletins. The bulletins are issued at irregular intervals and are sent to all residents of New Hampshire requesting them. Back numbers will be sent as long as the supply lasts. Lists of available publications will be sent upon request.

The above quotations taken from the Hatch and Adams acts are sufficient to indicate the true function of this and other experiment stations called into being by the passage of those laws. At first the experiment stations found it difficult to resist the popular demand made upon them to enter the extension field, to the neglect of research, but it is to the credit of the officials having the directing and executing of those laws in charge that our stations have proved true to their trust. If the stations had not devoted their energies to the fields of original research our agriculture could not possibly be upon the high plane which it occupies to-day.

The introduction of the extension service as a recognized part of the work of this and other similar institutions only serves to emphasize the importance of experiment station
work. In our haste to produce immediate results we sometimes lose sight of the value of the work of our experiment stations. We do not realize the debt agriculture owes to the scientists who are willing to devote their life work to the study of one subject, or at least a very few subjects, without thought to personal ambition and advancement, but purely seeking after truth and the advancement of science.

We can, perhaps, best indicate in a brief way the present work of the New Hampshire Experiment Station by calling attention to some of those projects which are receiving special study and attention.

**ADAMS FUND.**

**Agronomy Department.**—Water as a limiting factor in the production of corn.

**Botanical Department.**—A study of the toxic action of fungicides to parasitic fungi; physiology of the apple; a study of the effect of fungicides and insecticides on plants.

**Chemical Department.**—Potash in clay soils.

**Entomological Department.**—Control of root maggots by insecticides.

**Horticultural Department.**—Plant breeding: carnation breeding, squash breeding; fruit bud formation.

**Animal Husbandry Department.**—Sheep breeding.

The New Hampshire Experiment Station is glad at all times to give advice and assistance regarding all lines of agriculture and we invite you to make demands upon the station whenever you feel that this institution can be of assistance to you in any capacity. The experiment station is at the service of the citizens of New Hampshire at all times.
HATCH FUND.

Agronomy Department.—Variety tests of corn; ear row test of corn; fertilizer tests on grass lands; alfalfa improvement; clover plant selection; timothy selection and breeding; investigations on potato culture and fertilization.

Botany Department.—Effect of storage temperature on keeping qualities of potatoes; apple diseases.

Entomological Department.—Control of black flies and midgets; economic collection of insects; arsenical residues on fruit, foliage and grass, following spraying; the control of browntails.

Horticultural Department.—Variety tests of plums; variety tests of apples; variety tests of small fruits; blueberry industry in New Hampshire.

Chemical Department.—Effect of lime on New Hampshire soils.

Forestry Department.—Experiments in raising forest tree seedlings; experiments in establishing artificial forests of different species; experiments in immature white pine stands.

EXTENSION SERVICE.

The last few years have witnessed in this country a remarkable growth in the development of methods of teaching agriculture. The attitude of the public in general, as well as the rural population, toward technical agricultural training has become decidedly favorable. This change in feeling by the public toward the work of institutions offering training in agriculture has made possible and is responsible to a large extent for the unprecedented progress which has been made in agricultural teaching during the last dozen or fifteen years.

The extension service is intended to serve as a medium by which to take the work of both the college classroom and the experiment station fields and laboratories directly to
the homes and to the fields of the farmers. It is very difficult to place any just estimate upon the value of such service to a state or to the nation. The farmer’s cause is no longer considered of interest only to him. It is recognized today as never before that upon the prosperity of the farmer depends quite largely the general prosperity of all classes of people. The present high cost of living has done much to attract the attention of people to the relation which the farmer and his interests bear to them personally.

What the colleges and universities are to those young men and young women who come within their walls, the extension service is, only to a lesser degree, to the thousands who are beyond the reach of the classroom. In this state, for example, we have about six hundred students and fifty enrolled at New Hampshire College, while there is a rural population in the state of nearly two hundred thousand, many of whom it is possible to reach in some tangible and helpful way through the extension service.

It may be of interest to note some of the things it has been possible to accomplish under the above named conditions and what the work should mean to the industrial interests of the state.

Space will allow only sufficient room to name some of the activities of the extension service which have been given special emphasis during the past year. This brief outline will perhaps serve to indicate in a general way the scope of the work and something as to its value to the industrial interests of the state.

Correspondence: Letters of inquiry.

Field Demonstrations: In cooperation with farmers.

Variety Tests of Corn: In cooperation with farmers, and on county farms.

Top Dressing Hay Lands: In cooperation with farmers.

Value of Lime on New Hampshire Soils: In cooperation with farmers.

Orchard Sod Mulch.
Spraying Demonstrations.
Orchard Cover Crops.
Pruning and Spraying Demonstrations.
Agricultural Reading Courses: Nine subjects.
College and Station exhibits at Fairs and at Agricultural meetings.
Orchard Demonstrations: Hillsborough County.
Dairy Demonstrations: Grafton County.
Boys’ Club Work: Rockingham, Merrimack, Hillsborough and Cheshire Counties.
Girls’ Club Work: Rockingham, Merrimack, Hillsborough and Cheshire Counties.
Soil Fertility and Crop Rotation Demonstrations: Rockingham County.
Extension Publications: 58 extension press bulletins, 15 extension circulars, 4 extension bulletins.

Extension literature is sent to a mailing list of 12,000 in the state. Publications are sent free to every one requesting them.

COÖPERATIVE AGRICULTURAL EXTENSION WORK
SMITH-LEVER FUND.

Under the provisions of an act of Congress approved May 8, 1914, New Hampshire, the same as every other state, is to receive the sum of $10,000 from the federal government for supplementing and strengthening the extension work of the Agricultural College.

In addition to the annual appropriation of $10,000, each state is to share in increased allotments for seven years in the proportion which the rural population of each state is to the total rural population of all the states as determined by the next preceding federal census provided the state
shall appropriate an equal sum. If New Hampshire fulfills her part in carrying out the provisions of the Smith-Lever law, the state will receive in 1922-23 and thereafter, from the federal government, annually the sum of $24,572, for conducting coöperative demonstration work in agriculture and home economics.

This financial assistance from the federal government coming to New Hampshire as it does at a time when state and other funds are inadequate for meeting the demands which are constantly being made upon the college, will make it possible for the extension service to strengthen and develop its work along all lines and inject new life into every branch of the service.

The organization of distinct departments or divisions of extension service in connection with our state colleges and universities gives recognition and standing to the threefold function teaching resident students; conducting investigations; and carrying information and assistance from the college and station into all parts of the state, or extension work of the institution and is a decided step in advance.

It will no longer be necessary for the experiment stations to carry on general miscellaneous demonstrations under the guise of research. In the earlier history of our experiment stations, before the work was clearly defined, they were practically compelled by popular demand to engage in demonstration work.

The extension service with its own corps of men will relieve the college teaching staff and station workers from much of the miscellaneous extension work which they, of necessity, have been compelled to carry on in the past.

This new organization will permit the selection and assigning of such duties to the individual as he seems best fitted to perform, which will work for efficiency in all three departments or divisions. We have the Smith-Lever law to thank for hastening the time of bringing these things to pass.
The United States Department of Agriculture has created what is known as the States Relations Service to take charge of and coöperate with the several states in carrying out the provisions of the Smith-Lever law. Having the extension work of each state closely associated with the work of the United States Department of Agriculture through the States Relations Service will be a very potent factor in unifying and strengthening the extension work throughout the United States.

In starting the coöperative extension work in New Hampshire it has been the plan first to perfect an efficient organization through which to work; second, to recognize and attempt to assist in the development of the most important branches of agriculture in the state and to meet the most urgent needs for assistance in home economics.

In carrying out this general scheme and the provisions of the memorandum of understanding entered into with the States Relations Service, whereby all extension work conducted with Smith-Lever funds shall be on the project basis, approved by them, the following eight projects have been adopted.

Project No. 1. Organization of Coöperative Agricultural Extension work.

Project No. 2. County Agricultural Agents.

Project No. 3. Extension Instruction—Home Economics.

Project No. 4. Dairy Cow Test Associations.

Project No. 5. Orchard Demonstrations.

Project No. 6. Movable Schools.

Project No. 7. Demonstrations in Vegetable Gardening.

Project No. 8. Farm Management Demonstrations.

**Project No. 1:** Organization of Coöperative Agricultural Extension Work.

Project No. 1 has to do with the general organization and administration of the extension work conducted with Smith-Lever funds.
Project No. 2: County Agricultural Agents.

Emphasis has been given to country agricultural agent work because it has been demonstrated beyond question that by having an extension representative located in each county, it makes the most efficient organization within a state for conducting extension activities.

The county agent movement serves also as an important means by which the extension service of the college may enter into coöperative agreements with the County Farmers Association and with the Office of Farmers Coöperative Demonstrations in the Northern and Western States, a new office in the United States Department of Agriculture which has immediate charge of the coöperative county agent work in the northern and western states.

For financial reasons the county agent movement through the plan of coöperation cited above makes available $4 for every $1 of college Smith-Lever funds expended in the county, which, in view of the unquestioned value of county agent work, commends this type of extension service.

We have five counties organized at present and as fast as other counties can be organized it is planned to appoint other county agents until there is an agent in each county in the state.

A state leader of county agent work has been appointed to take immediate charge of the work. The state leader is employed jointly and represents the extension service of the college and the Office of Farmers Coöperative Demonstration Work in the Northern and Western States.

Project No. 3: Extension Instruction, Home Economics.

The Smith-Lever law makes provision for giving demonstration work in home economics. In the past the college has received a great many requests for lectures and demonstrations in home economics from all parts of the state. It has been possible to respond to only a few of these requests. Under the present plan of campaign a woman has been employed to organize women’s clubs in different parts of the state.
The instructor will give demonstrations and instructions in home economics which will tend to stimulate more interest in rural life and help to improve the healthfulness, the social life, and the economic conditions of the farm homes of the state.

The instructor in home economics plans to visit the clubs at least once a month and whenever possible twice a month. Courses for reading and study are outlined to cover ten to twelve months and have to do with foods, household management, textiles and clothing, and the care and feeding of children.

Project No. 4: Dairy Cow Test Associations.

There are ten dairy cow test associations in successful operation in the state. These organizations are playing an important part in improving dairy conditions. Through these associations the dairy farmers are enabled to weed out unprofitable cows, they are encouraged to keep better stock, keep records of farming operations, and to feed their animals more judiciously and economically. This work reveals the truth to the dairy farmer.

A man is placed in charge of dairy cow test association work in the state to assist in the organizing of new associations, to work with the testers, to see that they are making the most of their opportunities, to be of service to the members of the associations, and to compile and publish the results of the work.

Project No. 5: Orchard Demonstrations.

New Hampshire is naturally an orchard state and there is a lot of interest being taken in all forms of fruit-growing. Orchard culture makes up an important branch of the agriculture of the state.

In order that the extension service may be of the greatest service to the fruit-growers of New Hampshire a man has been engaged to devote all of his time to carrying on orchard demonstrations and to giving instructions in fruit culture.

Pruning, spraying, and packing demonstrations will be
given at the proper season and definite forms of orchard demonstrations setting forth approved orchard practices will be carried on in cooperation with practical growers of the state. Meetings will be held in the demonstration orchards from time to time so that results may be noted.

Project No. 6: *Movable Schools.*

To meet the demand for assistance in community improvement work movable schools have been organized.

The schools are held preferably in some of the smaller rural communities as they seem to be especially appreciated in such localities. These schools last four days and the lectures and demonstrations are made just as practical as it is possible to make them. Wherever possible the demonstrations are given in the field, the orchard, or in a barn in the neighborhood. Thirteen schools were held last winter with an attendance of 3,417, an average attendance at each session of about thirty-five.

These movable schools offer exceptional opportunities for the extension service to become acquainted with the people and the needs of the communities. Owing to the pleasant relations which are established through the medium of the schools it is possible to render still more valuable assistance to these neighborhoods through follow-up work.

Project No. 7: *Demonstrations in Vegetable Gardening.*

Vegetable gardening is a much neglected branch of farming in New Hampshire. Our manufacturing cities in the state create good markets. At present a large part of the vegetables consumed in our cities are grown outside the state.

For many reasons our market gardeners are not realizing from their labors and investments what they should. It is with a desire to be of service to some of those engaged in growing vegetables for market that an experienced and trained market gardener has been employed to work with the market gardeners in the vicinity of Manchester, Nashua and Concord. The work is of a practical nature and the
demonstration plots are carried on in coöperation with growers supplying vegetables for local markets.

It is hoped to show through these demonstration plots how the growers may meet more acceptably the demands of the local markets, and at the same time make it profitable for them to do so.

**Project No. 8: Farm Management Demonstrations.**

The New Hampshire State College is coöperating with the United States Department of Agriculture in making studies of the various systems of farm management in all parts of the state in order to determine the best systems of farming for each locality.

Four hundred and fifty farm surveys have been made in six counties. Most of these records have been returned to each individual farmer in the area covered by the survey in such a way that he can compare his own farm records with the average, and some of the best farms in that part of the state.

This covers in a brief way the plan of organization and lines of work which have been inaugurated with Smith-Lever funds for conducting extension work in agriculture and home economics in New Hampshire.
DEGREES CONFERRED IN 1915.

MASTER OF SCIENCE.
Batchelder, Chester Howard, B.S., 1913.

BACHELOR OF SCIENCE.

Agricultural Division.
Brown, Leon Frank.
Corriveau, Paul Edward.
Dearth, Raymond Edson.
Elliott, John Spalding.

Gamash, Albert William.
Sawyer, Clifford Augustus.
Swett, Walter Whittier.

Arts and Science Division.
Bartlett, Arnold Eastman.
Bean, Raymond Jackson.
Bowden, Raymond Charles.
Bronson, Forrest Dinsmore.
Came, Ralph Elbert.
Clark, Byron Humphrey.
Crafts, Leland Whitney.
Haines, Ray Edward.
Halvorsen, Henry Olaf.
Hobbs, James Francis, Jr.
Hoitt, Alice Joanna.
Hoitt, Caroline Elizabeth.
Hopkins, Anna Morse.
Jenkins, Everett Kelley.
Kinder, Roland Hugh.

Knight, Richard Adams.
Langley, Lester Libbey.
McKone, Esther Gladys.
Montgomery, Earl Roger.
Murdoch, Armand Leigh.
Murphy, Mary Frances.
Nash, Marion Edgerly.
Odiorne, Benjamin Gilbert.
Parker, Walter Francis.
Plumer, Helen Waldron.
Poland, Nellie Guild.
Reed, Clinton Arthur.
Story, Irving Chellis.
Waldron, Lena Vernice.

Engineering Division.
Bartlett, William Sanborn.
Bonardi, Jack.
Broggini, Marion James.
Davis, Charles Wesley.
Dustin, True Page.
Farnham, Harry Lothrop.

Garside, John Ingraham.
Grady, John Leo.
Grant, Arnold Jay.
Loomis, Glenn Moore.
Paulson, Carl Gustav.
Thompson, John Fawdrey.

Unclassified.
Fernald, Brackett Briton.
Fogg, Sherburne Hilliard.
Key, Yuling George.

McCartney, Arthur Orcutt.
Watson, Earl Elwin.
Welsh, Russell Hamilton.
Two-Year Certificates in Agriculture.

Allen, Merritt E.
Cram, Theodore Francis.
Crosby, Robert Frank.
Hall, Elmer Oliver.
Harriman, Samuel R.
Hazen, Gardner Williamson.
Learmonth, John Gullion.

McKenzie, Robert J.
Morse, Oscar Varnum.
Osborne, John Fred.
Runnals, George Alvin.
Seymour, George Walter.
Smith, Perley Jaques.
Whalin, Robert Alden.

HONOR LIST FOR 1915.

SPECIAL HONOR.

Average of 90 for the year's work.

1915.

Leland Whitney Crafts,
Marion Edgerly Nash,
Walter Whittier Swett,

1917.

Phyllis Mary Blanchard,

1918.

Charles Cummings,
Martha Luena Hoitt,

HONOR.

Average of 80 for the year's work.

1915.

Raymond Jackson Bean,
Jack Bonardi,
Raymond Charles Bowden,
Mario James BrogGINI,
Ralph Elbert Came,
Paul Edward CorriUeau,
Charles Wesley Davis,
Raymond Edson Dearth,

1917.

Albert William Gamash,
John Leo Grady,
James Francis Hobbs, Jr.,
Alice Joanna Hoitt,
Caroline Elizabeth Hoitt,

1918.

Arts and Science Course.
Arts and Science Course.
Animal Husbandry and Dairy-ing Course.
Arts and Science Course.
Agricultural Course.
Home Economics Course.

Arts and Science Course.
Chemical Engineering Course.
Arts and Science Course.
Chemical Engineering Course.
Arts and Science Course.
General Agricultural Course.
Chemical Engineering Course.
Animal Husbandry and Dairy-ing Course.
Forestry Course.
Electrical Engineering Course.
Arts and Science Course.
Arts and Science Course.
Arts and Science Course.
Anna Morse Hopkins, Everett Kelley Jenkins, Roland Hugh Kinder, Richard Adams Knight, Glenn Moore Loomis, Esther Gladys McKone, Earl Roger Montgomery, Walter Francis Parker, Helen Waldron Plumer, Nellie Guild Poland, Lena Vernice Waldron, Home Economics Course. Mechanic Arts Course. Arts and Science Course. Mechanic Arts Course. Mechanical Engineering Course. Arts and Science Course. Arts and Science Course. Arts and Science Course. Arts and Science Course. Arts and Science Course. Arts and Science Course.


Rosina Martha Diettrich, Mary Clementina Dole, Florence Lillian Dudley, Marion Grace Dudley, Stephen Webster Dyer, John Spalding Elliott, Frank Drew Ellsworth, Nettie Edith Austin Finley, Helen Agnes Hallisey, Leon Abbott Hawkins, Wesley Everett Howard, Jr., Marion Ruth Jenness, Stephen Guy Johnson, Flavia Locke Jones, Everett Harmon Kelley, Michael Reilly McGreal, Frederick Sanford Manter, Marion Edwena Mitchell, Marion Ruth Jenness, Stephen Guy Johnson, Flavia Locke Jones, Everett Harmon Kelley, Michael Reilly McGreal, Frederick Sanford Manter, Marion Edwena Mitchell,
William Remick Partington, 
Vincent Aubert Perkins, 
James Alson Purington, 
Bernice Reed, 
Lewis Byron Robinson, 
Herbert Richard Runnals, 

Neil Abner Sargent, 
Victor Haskell Smith, 

Joseph Albert Sullivan, 
William Thorpe Tapley, 
Walter Ira Waite, 
Carroll Charles Waldron, 
Charles Adolph Weigel, 
Nellie Lydia White, 
Russell Stewart Yeaton, 

Engineering Course. 
Horticultural Course. 
Arts and Science Course. 
Arts and Science Course. 
General Agricultural Course. 
Animal Husbandry and Dairying Course. 
Chemical Engineering Course. 
Animal Husbandry and Dairying Course. 
General Agricultural Course. 
Horticultural Course. 
Arts and Science Course. 
Mechanic Arts Course. 
General Agricultural Course. 
Arts and Science Course. 
Animal Husbandry and Dairying Course. 

1917. 

Goldie Basch, 
Vance Whiting Batchelor, 
Arthur Samuel Burleigh, 
Louise Elizabeth Burpee, 
Marion Olive Chase, 
Elmer Frank Cutts, 
Henry W. Degnan, 
William Allen Dudley, 
Clifton Henry Dustin, 
Alice Fernald, 
Isabel Jane Fernald, 
Philip Joseph Griffin, 
Frances Dorotha Hatch, 
Eleanor Hurst Lambert, 
Arthur Richardson Morgan, 
Henrietta Carleton Nudd, 
Beatrice Reed, 
Hansell Arthur Russell, 
Clarice Henrietta Shannon, 
Alberta Neal Steuerwald, 
Clark Leavitt Stevens, 
William Hervey Thomas, 
Edwin Albert Wiggin, 

Arts and Science Course. 
Arts and Science Course. 
Electrical Engineering Course. 
Home Economics Course. 
Arts and Science Course. 
Engineering Course. 
Arts and Science Course. 
Engineering Course. 
Mechanic Arts Course. 
Home Economics Course. 
Home Economics Course. 
Arts and Science Course. 
Arts and Science Course. 
Agricultural Course. 
Home Economics Course. 
Home Economics Course. 
Arts and Science Course. 
Home Economics Course. 
Home Economics Course. 
Agricultural Course. 
Agricultural Course. 
Mechanic Arts Course.
1918.

Willard Increase Allen, Jr.,
Harry Clifton Atkins,
Raymond Harvey Bagg,
John Arthur Baker,
Gladys Alice Brown,
Elenora Currier,
Mary Olive Cushing,
Heman Charles Fogg,
Mildred Margareta Flynn,
Ruth Whitney Hadley,
Florence Julia Harris,
John Edwin Humiston,
Weston Harvey Jeffers,
Russell Cyprian Jones,
Merton Burgess Lane,
Elmer Nason Sanders,
Sam Loring Stearns,
Ethel May Walker,
Hazel Searles Winn,

Arts and Science Course.
Chemical Engineering Course.
Engineering Course.
Chemical Engineering Course.
Arts and Science Course.
Home Economics Course.
Home Economics Course.
Chemical Engineering Course.
Arts and Science Course.
Home Economics Course.
Home Economics Course.
Agricultural Course.
Agricultural Course.
Arts and Science Course.
Chemical Engineering Course.
Chemical Engineering Course.
Agricultural Course.
Home Economics Course.
Arts and Science Course.

PRIZE RECORD FOR 1915.

BAILEY PRIZE.
Given by Dr. C. H. Bailey, Class of '79 and E. A. Bailey, Class of '85.
Charles Wesley Davis, Concord.

ERSKINE MASON MEMORIAL PRIZE.
Walter Whittier Swett, Gossville.

CHASE-DAVIS MEMORIAL MEDALS.
Gold Medal.
John Fawdrey Thompson, Tilton.

Silver Medal.
Paul Edward Corriveau, Concord.
NEW HAMPSHIRE COLLEGE.

SENIORS STANDING HIGHEST IN MILITARY DEPARTMENT.

Arnold J. Grant, Dover.
Richard A. Knight, Concord.

WINNERS OF INDIVIDUAL PRIZE DRILL.

Gold Medal.
Roy C. Graham, '17, Candia.

Silver Medal.
Ralph L. Dame, '18, Newport.

Bronze Medal.
William H. Thomas, '17, Franconia.

PRIZE SABRE—EXCELLENCE IN DRILL.

Dura P. Crockett, '16, New London.

SENIORS REPORTED TO ADJUTANT-GENERAL OF THE ARMY FOR APTITUDE IN MILITARY DEPARTMENT.

Arnold Jay Grant, Dover.
Richard A. Knight, Concord.
John F. Thompson, Tilton.

VALENTINE SMITH SCHOLARSHIPS.

Ralph Waldo Doeg, '16, Exeter.
Frances Dorotha Hatch, '17, Exeter.
Martha Luena Hoitt, '18, Durham.
Gladys Hoagland, '19, Stow, Mass.
ROSTER OF REGIMENT.

For 1915-16.

COMMANDANT.
First Lieutenant S. J. Sutherland, United States Infantry.

CADET OFFICERS AND NON-COMMISSIONED OFFICERS
FIELD AND STAFF.
Lieutenant-Colonel D. P. Crockett, Commanding Regiment.
Captain L. P. Philbrick, Adjutant.
Captain C. W. Archibald, Quartermaster.
Captain Joseph A. Sullivan, Range Officer.
Sergeant-Major H. W. Degnan.
Quartermaster-Sergeant E. S. Johnson.
Range Sergeant, B. H. Dwight.
Color Sergeant, J. H. Rollins.
Color Sergeant, H. R. Meserve.

FIRST BATTALION.
Major W. I. Waite, Commanding Battalion.
First Lieutenant G. D. Parnell, Adjutant.
Second Lieutenant O. C. Work, Quartermaster.

BAND.
First Lieutenant F. S. Manter.
Chief Musician P. S. Ward.
Principal Musician E. S. Ross.
Drum-Major N. J. Harriman.

Sergeants.
W. H. Hoyt.
W. H. O'Brien.

Corporals.
L. C. Swain.
H. B. Caswell.
P. R. Sinclair.

COMPANY A.
Captain G. W. Burke, Commanding Company.
First Lieutenant K. C. Westover.
Second Lieutenant W. P. Knox.
First Sergeant H. A. Russell.
Sergeants.

W. A. Dudley.
F. W. Fitch.

Corporals.

H. F. Jenkins.
G. B. Glidden.
A. N. Graham.

COMPANY B.

Captain E. L. Blake, Commanding Company.
First Lieutenant V. W. Batchelor.
Second Lieutenant A. B. Whittemore.
First Sergeant E. F. Cutts.

Sergeants.

C. O. Austin.
S. J. Green.

Corporals.

H. Eastman.
E. A. Hughes.

COMPANY C.

Captain W. E. Howard, Commanding Company.
First Lieutenant R. C. Graham.
Second Lieutenant J. D. Colomy.
First Sergeant F. P. Bennett.

Sergeants.

E. N. Sanders.
W. H. Bennett.

Corporals.

L. E. Merrill.
G. M. Howe.
J. A. Morrill.

SECOND BATTALION.

Major C. S. Pettee, Commanding Battalion.
First Lieutenant P. W. Watson, Adjutant.
Second Lieutenant R. D. Brackett, Quartermaster.

COMPANY D.

Captain G. W. Chase, Commanding Company.
First Lieutenant W. H. Thomas.
Second Lieutenant S. W. Wentworth.
First Sergeant H. Willand.
ROSTER OF REGIMENT.

Sergeants.
C. CUMMINGS.
H. F. SWETT.

P. A. TOOTHLAND.
C. W. POLAND.

Corporals.
R. Callendar.
E. D. Joslyn.

W. H. IRVINE.
P. B. GAY.

C. A. Gordon.

Musician.
C. Colby.

COMPANY E.
Captain W. T. Tapley, Commanding Company.
First Lieutenant R. C. Wiggin.
Second Lieutenant C. B. Tibbetts.
First Sergeant P. J. Griffin.

Sergeants.
J. A. Sussman.
J. B. Ford.

R. H. Sawyer.
M. B. Lane.

Corporals.
F. B. Cann.
C. A. Bennett.
C. B. Broderick.

S. H. Perley.
S. H. Dalton.
R. S. Morrill.

COMPANY F.
Captain W. J. Nelson, Commanding Company.
First Lieutenant C. C. Bond.
Second Lieutenant R. T. Roberts.
First Sergeant C. L. Stevens.

Sergeants.
R. L. Dame.
E. A. Wiggin.

L. A. Boutwell.
G. Martin.

Corporals.
J. E. Millimore.
B. G. Butterfield.
H. C. Main.

R. P. Nevers.
J. E. Humiston.
W. H. Jeffers.

SIGNAL PLATOON.
First Sergeant.
J. E. Frisbee.

Corporals.
A. S. Burleigh.
R. L. Nelson.

R. E. Hodgdon.
T. R. Anderton.
STUDENTS, 1915–1916.

This directory, for the first time, contains the number of hours toward graduation each student has credited to him on the records in the Registrar's Office. This list does not contain the hours earned from saved cuts for the first semester of the current year, but is supposed to be otherwise complete to March, 1916, including any make-up examinations reported to that time.

The course shows the department in which the student registered for the second semester of this year, and under P. O. Address, his residence at time of registration last fall.

The abbreviations indicating the course stand for the following departments:

- **a. h. and d.**—Animal Husbandry and Dairy course; **for.**—Forestry course; **hort.**—Horticultural course; **gen. a.**—General Agricultural course; **agi.**—Freshmen and Sophomores in the Agricultural course; **e. e.**—Chemical Engineering; **m. e.**—Mechanical Engineering course; **e. e.**—Electrical Engineering course; **a. and s.**—General Arts and Science course; **h. e.**—Home Economics course; **m. a. t.**—Mechanic Arts course.

### GRADUATES.

<table>
<thead>
<tr>
<th>Name</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bean, Raymond J.</td>
<td>a. and s</td>
<td>Laconia</td>
</tr>
<tr>
<td>Grant, Arnold J.</td>
<td>c. e.</td>
<td>Dover</td>
</tr>
<tr>
<td>Nash, Marion E.</td>
<td>a. and s</td>
<td>Dover</td>
</tr>
<tr>
<td>Smith, Todd Orin</td>
<td>agi.</td>
<td>Durham</td>
</tr>
<tr>
<td>Young, Harry P.</td>
<td>agi.</td>
<td>Durham</td>
</tr>
</tbody>
</table>

### SENIORS.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blake, Eston Lloyd,</td>
<td>108</td>
<td>a. h. and d.</td>
<td>Durham.</td>
</tr>
<tr>
<td>Brown, Harold Sunderlin</td>
<td>117</td>
<td>a. and s.</td>
<td>Manchester.</td>
</tr>
<tr>
<td>Brown, Lloyd Ridley,</td>
<td>136</td>
<td>a. and s.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Bugbee, Ralph Josiah,</td>
<td>132</td>
<td>a. h. and d.</td>
<td>Claremont.</td>
</tr>
<tr>
<td>Burke, George Wilbur,</td>
<td>131½</td>
<td>c. e.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Burt, Perry Warren,</td>
<td>132</td>
<td>a. h. and d.</td>
<td>Westmoreland.</td>
</tr>
<tr>
<td>Charbonneau, Genevieve A. J.,</td>
<td>121</td>
<td>a. and s.</td>
<td>Nashua.</td>
</tr>
<tr>
<td>Chase, Guy Wetherbee,</td>
<td>127</td>
<td>m. a. t.</td>
<td>Londonderry.</td>
</tr>
<tr>
<td>Cilley, Melissa Annie,</td>
<td>119</td>
<td>a. and s.</td>
<td>Colebrook.</td>
</tr>
<tr>
<td>Coffin, Alice Veva,</td>
<td>123</td>
<td>h. e.</td>
<td>Boscawen.</td>
</tr>
<tr>
<td>Crockett, Dura Prescott,</td>
<td>140</td>
<td>a. h. and d.</td>
<td>New London.</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>--------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Dietrich, Rosina Martha,</td>
<td>129</td>
<td>h. e.</td>
<td>Boston, Mass.</td>
</tr>
<tr>
<td>Doeg, Ralph Waldo,</td>
<td>141 2</td>
<td>e. e.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Dole, Mary Clementine,</td>
<td>119</td>
<td>a. and s.</td>
<td>Enfield</td>
</tr>
<tr>
<td>Dudley, Florence Lillian,</td>
<td>123</td>
<td>a. and s.</td>
<td>Reeds Ferry</td>
</tr>
<tr>
<td>Dudley, Marion Grace,</td>
<td>129</td>
<td>h. e.</td>
<td>Newmarket</td>
</tr>
<tr>
<td>Dwight, Bernard Henry,</td>
<td>123</td>
<td>a. and s.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Dudley, Stephen Webster,</td>
<td>133</td>
<td>a. h. and d.</td>
<td>Lawrence, Mass.</td>
</tr>
<tr>
<td>Finley, Nettie Edith Austin,</td>
<td>122</td>
<td>a. and s.</td>
<td>Dover</td>
</tr>
<tr>
<td>Flanders, Mildred Maleham,</td>
<td>118</td>
<td>a. and s.</td>
<td>Rochester</td>
</tr>
<tr>
<td>Fuller, Edward Deering,</td>
<td>125 2</td>
<td>c. e.</td>
<td>Atkinson</td>
</tr>
<tr>
<td>Hadley, John Corbin,</td>
<td>131</td>
<td>gen. a.</td>
<td>Durham</td>
</tr>
<tr>
<td>Hallisey, Helen Agnes,</td>
<td>120</td>
<td>a. and s.</td>
<td>Nashua</td>
</tr>
<tr>
<td>Hawkins, Leon Abbott,</td>
<td>130</td>
<td>hort.</td>
<td>Plymouth</td>
</tr>
<tr>
<td>Hayes, Robert Foss,</td>
<td>136 2</td>
<td>e. e.</td>
<td>Dover</td>
</tr>
<tr>
<td>Howard, Wesley Everett, Jr.,</td>
<td>142</td>
<td>a. h. and d.</td>
<td>Belmont</td>
</tr>
<tr>
<td>Hurd, Norman Cannavan,</td>
<td>141 2</td>
<td>e. e.</td>
<td>Dover</td>
</tr>
<tr>
<td>Jenness, Marion Rutt,</td>
<td>122</td>
<td>a. and s.</td>
<td>Dover</td>
</tr>
<tr>
<td>Johnson, Stephen Guy,</td>
<td>138</td>
<td>a. h. and d.</td>
<td>Winchester</td>
</tr>
<tr>
<td>Jones, Flavia Locke,</td>
<td>128</td>
<td>a. and s.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Kelley, Everett Harmon,</td>
<td>136</td>
<td>a. h. and d.</td>
<td>Barnstead</td>
</tr>
<tr>
<td>Lary, John Dana,</td>
<td>123</td>
<td>a. and s.</td>
<td>Berlin</td>
</tr>
<tr>
<td>McCartney, Robert Irving,</td>
<td>117 2</td>
<td>a. and s.</td>
<td>Kingston</td>
</tr>
<tr>
<td>McDuffee, Edward Clarence,</td>
<td>130 2</td>
<td>e. e.</td>
<td>Claremont</td>
</tr>
<tr>
<td>McGreal, Michael Riley,</td>
<td>128</td>
<td>a. and s.</td>
<td>Somersworth</td>
</tr>
<tr>
<td>Mack, Lillian Wallace,</td>
<td>111</td>
<td>h. e.</td>
<td>Derry</td>
</tr>
<tr>
<td>Manter, Fred Sanford,</td>
<td>120 2</td>
<td>a. and s.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Mazmanian, Misak Minas,</td>
<td>139</td>
<td>gen. a.</td>
<td>Huseynig, Armenia</td>
</tr>
<tr>
<td>Mitchell, Marion Edewena,</td>
<td>119</td>
<td>a. and s.</td>
<td>Newmarket</td>
</tr>
<tr>
<td>Morse, Stephen Noyes,</td>
<td>123 2</td>
<td>m. e.</td>
<td>Ashland</td>
</tr>
<tr>
<td>Nelson, George Albert,</td>
<td>117</td>
<td>a. and s.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Nelson, Westly Joseph,</td>
<td>139</td>
<td>a. h. and d.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Partington, William R.,</td>
<td>137 2</td>
<td>e. e.</td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Pennell, Philip Harlan,</td>
<td>125 2</td>
<td>a. and s.</td>
<td>Suncook</td>
</tr>
<tr>
<td>Perkins, Vincent Aubert,</td>
<td>134</td>
<td>hort.</td>
<td>Claremont</td>
</tr>
<tr>
<td>Pettee, Charles Swett,</td>
<td>125</td>
<td>a. and s.</td>
<td>Durham</td>
</tr>
<tr>
<td>Philbrick, Leonard Parker,</td>
<td>96 2</td>
<td>a. and s.</td>
<td>No. Hampton</td>
</tr>
<tr>
<td>Purrington, James Alson,</td>
<td>119</td>
<td>a. and s.</td>
<td>Hopkinton</td>
</tr>
<tr>
<td>Reed, Bernice,</td>
<td>122</td>
<td>a. and s.</td>
<td>Claremont</td>
</tr>
<tr>
<td>Robinson, Lewis Byron,</td>
<td>135 2</td>
<td>gen. a.</td>
<td>Concord, R. F. D.</td>
</tr>
<tr>
<td>Runnals, Herbert Richard,</td>
<td>137</td>
<td>a. h. and d.</td>
<td>West Lebanon</td>
</tr>
<tr>
<td>Sanborn, Eldred Richard,</td>
<td>135</td>
<td>m. a t.</td>
<td>Lochmere</td>
</tr>
<tr>
<td>Sargent, Neil Abner,</td>
<td>134 2</td>
<td>c. e.</td>
<td>Concord</td>
</tr>
<tr>
<td>Sawyer, Kenneth Earl,</td>
<td>136 2</td>
<td>e. e.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Smith, Albert Eaton,</td>
<td>130½</td>
<td>a. h. and d.</td>
<td>Hudson</td>
</tr>
<tr>
<td>Smith, Robert Carl,</td>
<td>116</td>
<td>a. and s.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Smith, Victor Haskell,</td>
<td>133</td>
<td>a. h. and d.</td>
<td>Hudson</td>
</tr>
<tr>
<td>Steele, Harold Arthur,</td>
<td>114</td>
<td>a. and s.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Studd, George Thomas,</td>
<td>145½</td>
<td>e. e.</td>
<td>Berlin</td>
</tr>
<tr>
<td>Sullivan, Joseph Albert,</td>
<td>123½</td>
<td>gen. a.</td>
<td>Dover</td>
</tr>
<tr>
<td>Swain, Howard Eugene,</td>
<td>116½</td>
<td>m. e.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Swett, Earle Frederick,</td>
<td>119</td>
<td>a. and s.</td>
<td>Andover</td>
</tr>
<tr>
<td>Tapley, William Thorpe,</td>
<td>131</td>
<td>hort.</td>
<td>Revere, Mass</td>
</tr>
<tr>
<td>Torrey, Robert Jordan,</td>
<td>121</td>
<td>a. and s.</td>
<td>East Putnam, Conn</td>
</tr>
<tr>
<td>Waite, Walter I.,</td>
<td>128½</td>
<td>a. and s.</td>
<td>Concord</td>
</tr>
<tr>
<td>Waldron, Carroll Charles,</td>
<td>126</td>
<td>m. a. t.</td>
<td>Center Strafford</td>
</tr>
<tr>
<td>Waldron, Etta Seaward,</td>
<td>121</td>
<td>h. e.</td>
<td>Center Strafford</td>
</tr>
<tr>
<td>Ward, Paul Stanwood,</td>
<td>120</td>
<td>a. and s.</td>
<td>Milford</td>
</tr>
<tr>
<td>Watson, Philip Wilder,</td>
<td>103½</td>
<td>m. a. t.</td>
<td>Dover</td>
</tr>
<tr>
<td>Weigel, Charles Adolph,</td>
<td>147</td>
<td>gen. a.</td>
<td>Lawrence</td>
</tr>
<tr>
<td>White, Nellie Lydia,</td>
<td>120</td>
<td>a. and s.</td>
<td>Enfield</td>
</tr>
<tr>
<td>Willard, Pitt Sawyer,</td>
<td>148½</td>
<td>c. e.</td>
<td>Dover</td>
</tr>
<tr>
<td>Work, Olin Charles,</td>
<td>119</td>
<td>m. a. t.</td>
<td>Exeter</td>
</tr>
</tbody>
</table>

**Juniors.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderton, Thomas Richard,</td>
<td>82</td>
<td>e. e.</td>
<td>Dover</td>
</tr>
<tr>
<td>Archibald, Clyde Warren,</td>
<td>113</td>
<td>e. e.</td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Basch, Goldie,</td>
<td>89</td>
<td>a. and s.</td>
<td>Ashuelot</td>
</tr>
<tr>
<td>Batchelor, Vance Whiting,</td>
<td>88</td>
<td>a. and s.</td>
<td>Durham</td>
</tr>
<tr>
<td>Bennett, Frank Powers,</td>
<td>94</td>
<td>c. e.</td>
<td>Northwood</td>
</tr>
<tr>
<td>Blanchard, Phyllis Mary,</td>
<td>89</td>
<td>a. and s.</td>
<td>Epping</td>
</tr>
<tr>
<td>Bond, Charles Chester,</td>
<td>77</td>
<td>a. and s.</td>
<td>Lisbon</td>
</tr>
<tr>
<td>Boutwell, Leroy Arthur,</td>
<td>75</td>
<td>m. e.</td>
<td>Concord</td>
</tr>
<tr>
<td>Brown, Gladys Alice,</td>
<td>79</td>
<td>a. and s.</td>
<td>Franklin</td>
</tr>
<tr>
<td>Brown, Oscar Choate,</td>
<td>146½</td>
<td>c. e.</td>
<td>Lebanon</td>
</tr>
<tr>
<td>Burleigh, Arthur Samuel,</td>
<td>93</td>
<td>e. e.</td>
<td>Ossipee</td>
</tr>
<tr>
<td>Burpee, Louise Elizabeth,</td>
<td>88</td>
<td>h. e.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Carlisle, Sumner,</td>
<td>79</td>
<td>a. h. and d.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Caswell, Henry Benson,</td>
<td>76</td>
<td>m. a. t.</td>
<td>Barnstead</td>
</tr>
<tr>
<td>Chase, Marion Olive,</td>
<td>89</td>
<td>a. and s.</td>
<td>Seabrook</td>
</tr>
<tr>
<td>Clark, Malcolm Barrett,</td>
<td>77</td>
<td>a. and s.</td>
<td>Bethlehem</td>
</tr>
<tr>
<td>Colby, Rachel Clarendra,</td>
<td>80</td>
<td>h. e.</td>
<td>New Boston</td>
</tr>
<tr>
<td>Colomy, James Daniel,</td>
<td>92</td>
<td>for</td>
<td>Durham</td>
</tr>
<tr>
<td>Cooley, Leon Weston,</td>
<td>88½</td>
<td>m. a. t.</td>
<td>Dana, Mass</td>
</tr>
<tr>
<td>Crouch, Leon Meader,</td>
<td>99½</td>
<td>a. and s.</td>
<td>Durham</td>
</tr>
<tr>
<td>Cutts, Elmer Frank,</td>
<td>92</td>
<td>e. e.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Davis, Leland Worthen,</td>
<td>122½</td>
<td>e. e.</td>
<td>Concord</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Dudley, William Allen,</td>
<td>92</td>
<td>e. e.</td>
<td>Colebrook.</td>
</tr>
<tr>
<td>Dustin, Clifton Henry,</td>
<td>94</td>
<td>m. a. t.</td>
<td>Rochester.</td>
</tr>
<tr>
<td>Evans, George Everett,</td>
<td>82</td>
<td>for.</td>
<td>East Kingston.</td>
</tr>
<tr>
<td>Ewer, Natalie Drew,</td>
<td>89</td>
<td>a. and s.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Fall, Beatrice Louise,</td>
<td>82</td>
<td>a. and s.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Fernald, Alice,</td>
<td>81</td>
<td>h. e.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Fernald, Isabel Jane,</td>
<td>86</td>
<td>h. e.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Fitch, Frank Williams,</td>
<td>92</td>
<td>a. h. and d.</td>
<td>Windsor, Vt.</td>
</tr>
<tr>
<td>Frisbee, Joseph Elliot,</td>
<td>92</td>
<td>e. e.</td>
<td>Portsmouth.</td>
</tr>
<tr>
<td>Gilmore, Ralph Harold,</td>
<td>78</td>
<td>m. a t.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Glidden, Chester Willis,</td>
<td>94</td>
<td>a. h. and d.</td>
<td>Alton Bay.</td>
</tr>
<tr>
<td>Graham, Roy Charles L.,</td>
<td>96</td>
<td>a. and s.</td>
<td>Candia.</td>
</tr>
<tr>
<td>Griffin, Philip Joseph,</td>
<td>111</td>
<td>a. and s.</td>
<td>Portsmouth.</td>
</tr>
<tr>
<td>Hardy, Verna Carola,</td>
<td>88</td>
<td>a. and s.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Harriman, Nathaniel Joy,</td>
<td>85</td>
<td>a. and s.</td>
<td>Laconia.</td>
</tr>
<tr>
<td>Hatch, Frances Dorothea,</td>
<td>90</td>
<td>a. and s.</td>
<td>Exeter.</td>
</tr>
<tr>
<td>Hayden, Philip Alden,</td>
<td>103</td>
<td>a. h. and d.</td>
<td>Brookline.</td>
</tr>
<tr>
<td>Hodgdon, Robert Edgar,</td>
<td>93</td>
<td>e. e.</td>
<td>Rochester.</td>
</tr>
<tr>
<td>Hoyt, Willis Hadley,</td>
<td>98</td>
<td>a. h. and d.</td>
<td>Newington.</td>
</tr>
<tr>
<td>Hussey, Ruth Janet,</td>
<td>78</td>
<td>a. and s.</td>
<td>Rochester.</td>
</tr>
<tr>
<td>Jenkins, Harvey Foss,</td>
<td>91</td>
<td>gen. a.</td>
<td>Manchester.</td>
</tr>
<tr>
<td>Johnson, Myrtle May,</td>
<td>83</td>
<td>a. and s.</td>
<td>Reed's Ferry.</td>
</tr>
<tr>
<td>Kidder, Harold Soule,</td>
<td>124 1/2</td>
<td>e. e.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Knox, Warren Penn,</td>
<td>89</td>
<td>gen. a.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Lake, Leroy Moses,</td>
<td>96</td>
<td>a. h. and d.</td>
<td>Brentwood.</td>
</tr>
<tr>
<td>Lambert, Eleanor Hurst,</td>
<td>86</td>
<td>a. and s.</td>
<td>Kittery Point, Me.</td>
</tr>
<tr>
<td>Langley, Mary Anthony,</td>
<td>72</td>
<td>h. e.</td>
<td>Durham.</td>
</tr>
<tr>
<td>Little, Harold Benjamin,</td>
<td>98</td>
<td>hort.</td>
<td>Colebrook.</td>
</tr>
<tr>
<td>Lombard, Carl Weston,</td>
<td>92</td>
<td>m. a. t.</td>
<td>Newburyport, Mass.</td>
</tr>
<tr>
<td>Long, Edward,</td>
<td>80</td>
<td>for.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Lord, Eugene Hodgdon,</td>
<td>81</td>
<td>m. a. t.</td>
<td>Hopkinton.</td>
</tr>
<tr>
<td>Meserve, Harlan Ray,</td>
<td>78</td>
<td>a. and s.</td>
<td>Rochester.</td>
</tr>
<tr>
<td>Morey, Isabel Marie,</td>
<td>84</td>
<td>h. e.</td>
<td>Andover.</td>
</tr>
<tr>
<td>Morgan, Arthur Richardson,</td>
<td>94</td>
<td>a. h. and d.</td>
<td>Durham.</td>
</tr>
<tr>
<td>Nelson, Rufus Lawrence,</td>
<td>91</td>
<td>e. e.</td>
<td>Tilton.</td>
</tr>
<tr>
<td>Nichols, Earl Brazil,</td>
<td>96</td>
<td>a. h. and d.</td>
<td>Newton.</td>
</tr>
<tr>
<td>Nudd, Henrietta Carleton,</td>
<td>90</td>
<td>h. e.</td>
<td>Hampton.</td>
</tr>
<tr>
<td>O'Brien, William Henry,</td>
<td>72</td>
<td>e. e.</td>
<td>Walpole.</td>
</tr>
<tr>
<td>Parker, Ralph Hartham,</td>
<td>97 1/2</td>
<td>a. and s.</td>
<td>Kingston.</td>
</tr>
<tr>
<td>Parnell, George Downes,</td>
<td>90</td>
<td>e. e.</td>
<td>Manchester.</td>
</tr>
<tr>
<td>Reed, Beatrice,</td>
<td>86</td>
<td>h. e.</td>
<td>Claremont.</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Roberts, Julia Aurelia,</td>
<td>87</td>
<td>h. e.</td>
<td>Toledo, Ohio.</td>
</tr>
<tr>
<td>Roberts, Ray Towle,</td>
<td>90</td>
<td>e. e.</td>
<td>West Concord.</td>
</tr>
<tr>
<td>Robinson, Nathaniel Edwin,</td>
<td>88</td>
<td>m. a. t.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Rollins, John Hooper,</td>
<td>87</td>
<td>c. e.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Ross, Edgar Samuel,</td>
<td>85</td>
<td>c. e.</td>
<td>Nashua.</td>
</tr>
<tr>
<td>Scruton, Herbert Ambrose,</td>
<td>99½</td>
<td>a. and s.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Shannon, Clarice Henrietta,</td>
<td>88</td>
<td>h. e.</td>
<td>Laconia.</td>
</tr>
<tr>
<td>Steuerwald, Alberta Neal,</td>
<td>88</td>
<td>h. e.</td>
<td>Dover.</td>
</tr>
<tr>
<td>Stevens, Clark Leavitt,</td>
<td>92</td>
<td>for.</td>
<td>Colebrook.</td>
</tr>
<tr>
<td>Sussman, Joseph Abraham,</td>
<td>90</td>
<td>a. and s.</td>
<td>Portsmouth.</td>
</tr>
<tr>
<td>Tibbetts, Carleton Briggs,</td>
<td>88</td>
<td>c. e.</td>
<td>Somersworth.</td>
</tr>
<tr>
<td>Tilton, Helen Florence,</td>
<td>82</td>
<td>a. and s.</td>
<td>Auburn.</td>
</tr>
<tr>
<td>Turcotte, Abby Jewett,</td>
<td>83</td>
<td>h. e.</td>
<td>Lakeport.</td>
</tr>
<tr>
<td>Wagner, Edward Richard,</td>
<td>84</td>
<td>c. e.</td>
<td>Manchester.</td>
</tr>
<tr>
<td>Weston, Fred Webster,</td>
<td>79</td>
<td>a. and s.</td>
<td>Lisbon.</td>
</tr>
<tr>
<td>Weston, Helen Brown,</td>
<td>89</td>
<td>h. e.</td>
<td>Lisbon.</td>
</tr>
<tr>
<td>Westover, Kyle Chester,</td>
<td>93</td>
<td>hort.</td>
<td>Manchester.</td>
</tr>
<tr>
<td>Wiggin, Edwin Albert,</td>
<td>86</td>
<td>m. a. t.</td>
<td>Exeter.</td>
</tr>
<tr>
<td>Wiggin, Rohl Chase,</td>
<td>86</td>
<td>a. and s.</td>
<td>Concord.</td>
</tr>
<tr>
<td>Worcester, Mary Abbie,</td>
<td>87</td>
<td>h. e.</td>
<td>Berwick.</td>
</tr>
</tbody>
</table>

**SOPHOMORES.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott, James Hamilton,</td>
<td>40</td>
<td>m. a. t.</td>
<td>Derry.</td>
</tr>
<tr>
<td>Allen, Willard Increase, Jr.,</td>
<td>52</td>
<td>a. and s.</td>
<td>Bridgeport, Conn.</td>
</tr>
<tr>
<td>Atkins, Harry Clifton,</td>
<td>54</td>
<td>c. e.</td>
<td>Franklin.</td>
</tr>
<tr>
<td>Austin, Charles Oakley,</td>
<td>56</td>
<td>agi.</td>
<td>Laconia.</td>
</tr>
<tr>
<td>Bachelder, Henry Putney,</td>
<td>55</td>
<td>agi.</td>
<td>East Andover.</td>
</tr>
<tr>
<td>Badger, Phillips Brooks,</td>
<td>57</td>
<td>agi.</td>
<td>Portsmouth.</td>
</tr>
<tr>
<td>Bagg, Raymond Harvey,</td>
<td>56</td>
<td>e. e.</td>
<td>West Springfield, Mass.</td>
</tr>
<tr>
<td>Baker, John Arthur,</td>
<td>52</td>
<td>c. e.</td>
<td>Claremont.</td>
</tr>
<tr>
<td>Barker, Forrest Allen,</td>
<td>36</td>
<td>e. e.</td>
<td>Nashua.</td>
</tr>
<tr>
<td>Bartlett, Richard Cilley,</td>
<td>48</td>
<td>e. e.</td>
<td>Derry Village.</td>
</tr>
<tr>
<td>Batchelder, Philip,</td>
<td>55</td>
<td>a. and s.</td>
<td>Durham.</td>
</tr>
<tr>
<td>Bell, Ernest Lorne,</td>
<td>43</td>
<td>a. and s.</td>
<td>Plymouth.</td>
</tr>
<tr>
<td>Bennett, Charles Alfred,</td>
<td>59</td>
<td>a. and s.</td>
<td>Wakefield.</td>
</tr>
<tr>
<td>Bennett, William Henry,</td>
<td>44</td>
<td>a. and s.</td>
<td>Lowell, Mass.</td>
</tr>
<tr>
<td>Benson, Maurice Haynes,</td>
<td>44</td>
<td>agi.</td>
<td>Lebanon.</td>
</tr>
<tr>
<td>Blatchford, George Nason,</td>
<td>54</td>
<td>a. and s.</td>
<td>Hampton Falls.</td>
</tr>
<tr>
<td>Brackett, Ralph de R.,</td>
<td>61</td>
<td>agi.</td>
<td>Greenland.</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------</td>
<td>--------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Bragdon, Doris Lillian</td>
<td>52</td>
<td>h. e.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Brill, Milo Horace</td>
<td>48</td>
<td>a. and s.</td>
<td>Newport</td>
</tr>
<tr>
<td>Broderick, Charles Bernard</td>
<td>53</td>
<td>aq.</td>
<td>Exeter</td>
</tr>
<tr>
<td>Bugbee, Helen Marion</td>
<td>50</td>
<td>a. and s.</td>
<td>Claremont</td>
</tr>
<tr>
<td>Burekel, Arthur Walter</td>
<td>41</td>
<td>c. e.</td>
<td>Lawrence, Mass.</td>
</tr>
<tr>
<td>Butterfield, Byron G.</td>
<td>52</td>
<td>aq.</td>
<td>Antrim</td>
</tr>
<tr>
<td>Byron, Rachael Agnes</td>
<td>22</td>
<td>a. and s.</td>
<td>Newport</td>
</tr>
<tr>
<td>Cahalane, Reginald Foster</td>
<td>50</td>
<td>a. and s.</td>
<td>Stamford, Conn.</td>
</tr>
<tr>
<td>Came, Carleton Lord</td>
<td>53</td>
<td>c. e.</td>
<td>Somersworth</td>
</tr>
<tr>
<td>Cann, Frederick Bowman</td>
<td>46</td>
<td>e. e.</td>
<td>Jaffrey</td>
</tr>
<tr>
<td>Center, Mary Elizabeth</td>
<td>34</td>
<td>h. e.</td>
<td>Hudson</td>
</tr>
<tr>
<td>Clarke, Hazel Mae</td>
<td>39</td>
<td>h. e.</td>
<td>Manchester</td>
</tr>
<tr>
<td>Clarke, Hugh Trescott</td>
<td>46</td>
<td>a. and s.</td>
<td>Canaan</td>
</tr>
<tr>
<td>Coburn, Rodney Clyde</td>
<td>53</td>
<td>c. e.</td>
<td>Lowell, Mass.</td>
</tr>
<tr>
<td>Cummings, Charles</td>
<td>71</td>
<td>aq.</td>
<td>Colebrook</td>
</tr>
<tr>
<td>Currier, Elenora</td>
<td>51</td>
<td>h. e.</td>
<td>Lochmere</td>
</tr>
<tr>
<td>Cushing, Mary Olive</td>
<td>53</td>
<td>h. c.</td>
<td>Concord</td>
</tr>
<tr>
<td>Dalton, Stanley Hatch</td>
<td>52</td>
<td>aq.</td>
<td>Nashua</td>
</tr>
<tr>
<td>Dame, Ralph Leighton</td>
<td>41</td>
<td>aq.</td>
<td>Newport</td>
</tr>
<tr>
<td>Densmore, John Francis</td>
<td>48</td>
<td>a. and s.</td>
<td>Hanover</td>
</tr>
<tr>
<td>Dodge, James William</td>
<td>56</td>
<td>e. e.</td>
<td>Contoocook</td>
</tr>
<tr>
<td>Dreiler, Louis</td>
<td>54</td>
<td>e. e.</td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Durgin, Charles B.</td>
<td>52</td>
<td>c. e.</td>
<td>Wilton</td>
</tr>
<tr>
<td>Durgin, John Frank</td>
<td>49</td>
<td>aq.</td>
<td>Newmarket</td>
</tr>
<tr>
<td>Eastman, Eva Emma</td>
<td>52</td>
<td>a. and s.</td>
<td>Concord</td>
</tr>
<tr>
<td>Flynn, Mildred Margaretta</td>
<td>54</td>
<td>a. and s.</td>
<td>Dover</td>
</tr>
<tr>
<td>Fogg, Herman Charles</td>
<td>55</td>
<td>c. e.</td>
<td>Concord</td>
</tr>
<tr>
<td>Ford, Joseph Basil</td>
<td>50</td>
<td>aq.</td>
<td>Milford</td>
</tr>
<tr>
<td>Foss, Edith Emily</td>
<td>57</td>
<td>a. and s.</td>
<td>Dover</td>
</tr>
<tr>
<td>Furber, Josephine M.</td>
<td>53</td>
<td>h. e.</td>
<td>Laconia</td>
</tr>
<tr>
<td>Garland, Otis Raymond</td>
<td>56</td>
<td>aq.</td>
<td>Hampton</td>
</tr>
<tr>
<td>George, Maurice Channing</td>
<td>55</td>
<td>m. e.</td>
<td>Danville</td>
</tr>
<tr>
<td>Goodrich, Wendell Eugene</td>
<td>54</td>
<td>e. e.</td>
<td>Hanover</td>
</tr>
<tr>
<td>Gove, Lucile Adeline</td>
<td>46</td>
<td>a. and s.</td>
<td>North Danville</td>
</tr>
<tr>
<td>Graham, Alfred Newman</td>
<td>52</td>
<td>a. and s.</td>
<td>Henniker</td>
</tr>
<tr>
<td>Graham, Clifford L.</td>
<td>34</td>
<td>aq.</td>
<td>Epping</td>
</tr>
<tr>
<td>Hadley, Ruth Whitney</td>
<td>51</td>
<td>h. e.</td>
<td>Durham</td>
</tr>
<tr>
<td>Hall, Fred William</td>
<td>46</td>
<td>aq.</td>
<td>Center Strafford</td>
</tr>
<tr>
<td>Hardy, Ernest Winfield</td>
<td>50</td>
<td>aq.</td>
<td>Contoocook</td>
</tr>
<tr>
<td>Harris, Florence Julia</td>
<td>52</td>
<td>h. e.</td>
<td>Laconia</td>
</tr>
<tr>
<td>Hewey, Hilbert Goodrich, Jr.</td>
<td>54</td>
<td>a. and s.</td>
<td>Lewiston, Me.</td>
</tr>
<tr>
<td>Hoitt, Martha Luena</td>
<td>55</td>
<td>h. e.</td>
<td>Durham</td>
</tr>
<tr>
<td>Name</td>
<td>Hours'</td>
<td>Credit</td>
<td>Course</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Howe, Fred John</td>
<td>42</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Howe, George Merrill</td>
<td>42</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Humiston, John Edwin</td>
<td>56</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Hunting, Ronald Walter</td>
<td>33</td>
<td>e. e.</td>
<td>e. e.</td>
</tr>
<tr>
<td>Huse, Irene Meyers</td>
<td>54</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Huse, Raymond Warren</td>
<td>54</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Hutchinson, Perne Rawson</td>
<td>72</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Hutchinson, Raymond Walch</td>
<td>57</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Hyde, Lincoln Spencer</td>
<td>46</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Ingerson, Della May</td>
<td>45</td>
<td>h. e.</td>
<td>h. e.</td>
</tr>
<tr>
<td>Irvine, Howard Thompson</td>
<td>53</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Jeffers, Weston Harvey</td>
<td>63</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Jenkins, Rodney Solon</td>
<td>52</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Jones, Russell Cyprian</td>
<td>56</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>King, Elsie Louise</td>
<td>52</td>
<td>h. e.</td>
<td>h. e.</td>
</tr>
<tr>
<td>Lane, Merton Burgess</td>
<td>55</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Lary, Erma Masso</td>
<td>46</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Libby, Donald Whitney</td>
<td>40</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Lynde, Leslie Eugene</td>
<td>59</td>
<td>e. e.</td>
<td>e. e.</td>
</tr>
<tr>
<td>McConachie, Max</td>
<td>55</td>
<td>e. e.</td>
<td>e. e.</td>
</tr>
<tr>
<td>Martin, Giles</td>
<td>44</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Merrill, Lester Edwin</td>
<td>45</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Merrill, Marguerite Mae</td>
<td>52</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Miltimore, John Everett</td>
<td>54</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Moore, Leroy Stearns</td>
<td>36</td>
<td>m. a. t.</td>
<td>m. a. t.</td>
</tr>
<tr>
<td>Morrill, Joseph Warren</td>
<td>56</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Morrill, Raymond Soule</td>
<td>56</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Nevers, Ralph Poor</td>
<td>41</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Ordway, Frederick Ira, Jr.,</td>
<td>40</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Osbourn, Carver Haines</td>
<td>40</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Parsons, John Joseph</td>
<td>53</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Perley, Sidney Harold</td>
<td>44</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Pope, Lemuel</td>
<td>37</td>
<td>m. e.</td>
<td>m. e.</td>
</tr>
<tr>
<td>Richardson, Clesson W.,</td>
<td>47</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Sanders, Elmer Nason</td>
<td>56</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Sawyer, Lester Little</td>
<td>42</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Sawyer, Robert Hamilton</td>
<td>60</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Scovell, Earl Louis</td>
<td>53</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Sinclair, Philip Raymond</td>
<td>38 1/2</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Sleeper, Clarence Wilson</td>
<td>56</td>
<td>a. and s.</td>
<td>a. and s.</td>
</tr>
<tr>
<td>Spencer, Archie M.</td>
<td>54</td>
<td>m. c.</td>
<td>m. c.</td>
</tr>
<tr>
<td>Stearns, Sam Loring</td>
<td>57</td>
<td>agi.</td>
<td>agi.</td>
</tr>
<tr>
<td>Stimson, Robert Chapman</td>
<td>56</td>
<td>c. e.</td>
<td>c. e.</td>
</tr>
<tr>
<td>Stuart, Joseph Warren</td>
<td>45</td>
<td>m. a. t.</td>
<td>m. a. t.</td>
</tr>
<tr>
<td>Name</td>
<td>Hours'</td>
<td>Credit</td>
<td>Course</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Swain, Lewis Churchill</td>
<td>52</td>
<td>agi.</td>
<td></td>
</tr>
<tr>
<td>Walker, Ethel May</td>
<td>52</td>
<td>h. e.</td>
<td></td>
</tr>
<tr>
<td>Waterman, Clarence S.</td>
<td>58½</td>
<td>agi.</td>
<td></td>
</tr>
<tr>
<td>Wentworth, Rollins</td>
<td>55</td>
<td>e. e.</td>
<td></td>
</tr>
<tr>
<td>Whippens, Norman Francis</td>
<td>56</td>
<td>agi.</td>
<td></td>
</tr>
<tr>
<td>Winn, Hazel Searle</td>
<td>54</td>
<td>a. and s.</td>
<td></td>
</tr>
<tr>
<td>Young, Claiborne Hart</td>
<td>56</td>
<td>agi.</td>
<td></td>
</tr>
</tbody>
</table>

**FRESHMEN.**

Hours of credit are not computed for students unable, for various reasons, to complete the semester.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours'</th>
<th>Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, Albert Warner,</td>
<td>17</td>
<td>a. and s.</td>
<td></td>
<td>Alton.</td>
</tr>
<tr>
<td>Adams, Forrest Eugene,</td>
<td>15</td>
<td>m. a. t.</td>
<td></td>
<td>Westbrook, Me.</td>
</tr>
<tr>
<td>Amor, John Adams</td>
<td>9</td>
<td>m. e.</td>
<td></td>
<td>Penacook.</td>
</tr>
<tr>
<td>Ashford, Olive Irene,</td>
<td>8</td>
<td>h. e.</td>
<td></td>
<td>Antrim.</td>
</tr>
<tr>
<td>Baker, Margaret Edna</td>
<td>17</td>
<td>h. e.</td>
<td></td>
<td>Littleton.</td>
</tr>
<tr>
<td>Bartlett, Edward Emery,</td>
<td>16</td>
<td>e. e.</td>
<td></td>
<td>Derry.</td>
</tr>
<tr>
<td>Bellows, Charles Byron,</td>
<td>e. e.</td>
<td></td>
<td></td>
<td>Groveton.</td>
</tr>
<tr>
<td>Belyea, Clement Chipman,</td>
<td>16</td>
<td>c. e.</td>
<td></td>
<td>Newfields.</td>
</tr>
<tr>
<td>Benson, Priscilla</td>
<td>11</td>
<td>h. e.</td>
<td></td>
<td>Lebanon.</td>
</tr>
<tr>
<td>Blodgett, Frank Hoben</td>
<td>17</td>
<td>c. e.</td>
<td></td>
<td>Concord.</td>
</tr>
<tr>
<td>Boomer, Stephen Henry</td>
<td>12</td>
<td>agi.</td>
<td></td>
<td>Cumberland Mills, Me.</td>
</tr>
<tr>
<td>Brosnan, John Andrew</td>
<td>18</td>
<td>agi.</td>
<td></td>
<td>Thorndike, Mass.</td>
</tr>
<tr>
<td>Brown, Irving Charles,</td>
<td>18</td>
<td>a. and s.</td>
<td></td>
<td>Franklin.</td>
</tr>
<tr>
<td>Brown, Lawrence William,</td>
<td>agi.</td>
<td></td>
<td></td>
<td>Strafford.</td>
</tr>
<tr>
<td>Buckley, John Edward,</td>
<td>16</td>
<td>e. e.</td>
<td></td>
<td>Nashua.</td>
</tr>
<tr>
<td>Bullard, Harold Fred</td>
<td>a. and s.</td>
<td></td>
<td></td>
<td>Manchester.</td>
</tr>
<tr>
<td>Burbank, Paul William,</td>
<td>10</td>
<td>a. and s.</td>
<td></td>
<td>Berlin.</td>
</tr>
<tr>
<td>Callender, Benjamin R.,</td>
<td>18</td>
<td>agi.</td>
<td></td>
<td>Whitefield.</td>
</tr>
<tr>
<td>Carpenter, Esther Leavitt</td>
<td>17</td>
<td>a. and s.</td>
<td></td>
<td>Newmarket.</td>
</tr>
<tr>
<td>Carr, James Irwin</td>
<td>18</td>
<td>c. e.</td>
<td></td>
<td>Hancock.</td>
</tr>
<tr>
<td>Chamberlain, Muriel</td>
<td>17</td>
<td>a. and s.</td>
<td></td>
<td>Bethlehem.</td>
</tr>
<tr>
<td>Clapp, Arthur Everett,</td>
<td>18</td>
<td>a. and s.</td>
<td></td>
<td>Portsmouth.</td>
</tr>
<tr>
<td>Cochrane, Thomas Joseph,</td>
<td>18</td>
<td>c. e.</td>
<td></td>
<td>Ludlow, Mass.</td>
</tr>
<tr>
<td>Coggin, Guy Albert</td>
<td>12</td>
<td>a. and s.</td>
<td></td>
<td>Mont Vernon.</td>
</tr>
<tr>
<td>Cohen, Lewis Albert</td>
<td>17</td>
<td>a. and s.</td>
<td></td>
<td>Nashua.</td>
</tr>
<tr>
<td>Colby, Oliver Messer</td>
<td>12</td>
<td>a. and s.</td>
<td></td>
<td>Lakeport.</td>
</tr>
<tr>
<td>Conley, James Joseph,</td>
<td>c. e.</td>
<td></td>
<td></td>
<td>Somersworth.</td>
</tr>
<tr>
<td>Cressey, Mary Robinson,</td>
<td>18</td>
<td>a. and s.</td>
<td></td>
<td>Dover.</td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------</td>
<td>--------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>Cullinan, John Francis,</td>
<td>18</td>
<td>m. e.</td>
<td>Portsmouth.</td>
<td></td>
</tr>
<tr>
<td>Dimond, Blanche Farnum,</td>
<td>17</td>
<td>h. e.</td>
<td>Concord.</td>
<td></td>
</tr>
<tr>
<td>Doherty, Mildred Eva,</td>
<td>11</td>
<td>h. e.</td>
<td>Derry.</td>
<td></td>
</tr>
<tr>
<td>Dudley, Dorris,</td>
<td>15</td>
<td>a. and s.</td>
<td>Reed's Ferry.</td>
<td></td>
</tr>
<tr>
<td>Dustin, Cecil Calvert,</td>
<td>18</td>
<td>aqi.</td>
<td>Rochester.</td>
<td></td>
</tr>
<tr>
<td>Edwards, Laurene M.,</td>
<td>11</td>
<td>h. e.</td>
<td>Franklin.</td>
<td></td>
</tr>
<tr>
<td>Emery, Henry Alfred,</td>
<td>12</td>
<td>e. e.</td>
<td>Auburn.</td>
<td></td>
</tr>
<tr>
<td>Ewart, Raymond James,</td>
<td>21</td>
<td>aqi.</td>
<td>No. Andover, Mass.</td>
<td></td>
</tr>
<tr>
<td>Ewer, Everett Donald,</td>
<td>15</td>
<td>a. and s.</td>
<td>Dover.</td>
<td></td>
</tr>
<tr>
<td>Fenderson, Kendrick Elwell,</td>
<td>8</td>
<td>a. and s.</td>
<td>Dover.</td>
<td></td>
</tr>
<tr>
<td>Foster, Harold Sinclair,</td>
<td>15</td>
<td>e. e.</td>
<td>Bath.</td>
<td></td>
</tr>
<tr>
<td>Foster, Mabel Lydia,</td>
<td>14</td>
<td>h. e.</td>
<td>Claremont.</td>
<td></td>
</tr>
<tr>
<td>Fuller, Fred Bennell,</td>
<td>16</td>
<td>a. and s.</td>
<td>Jefferson.</td>
<td></td>
</tr>
<tr>
<td>Gale, Joseph Morrill,</td>
<td>15</td>
<td>aqi.</td>
<td>Concord.</td>
<td></td>
</tr>
<tr>
<td>Garland, Oscar Leavitt,</td>
<td>15</td>
<td>m. e.</td>
<td>Hampton.</td>
<td></td>
</tr>
<tr>
<td>Giles, Arthur Cyrus,</td>
<td>8</td>
<td>aqi.</td>
<td>Northwood.</td>
<td></td>
</tr>
<tr>
<td>Glidden, N. Frank,</td>
<td>15</td>
<td>aqi.</td>
<td>Alton Bay.</td>
<td></td>
</tr>
<tr>
<td>Gordon, George Carleton,</td>
<td>15</td>
<td>aqi.</td>
<td>Haverhill.</td>
<td></td>
</tr>
<tr>
<td>Goss, Louis Stillman,</td>
<td>15</td>
<td>e. e.</td>
<td>Lakeport.</td>
<td></td>
</tr>
<tr>
<td>Gray, Walter Benson,</td>
<td>16</td>
<td>e. e.</td>
<td>Rochester.</td>
<td></td>
</tr>
<tr>
<td>Greenfield, Sara Ella,</td>
<td>8</td>
<td>a. and s.</td>
<td>Rochester.</td>
<td></td>
</tr>
<tr>
<td>Hale, Dorothy Adeline,</td>
<td>17</td>
<td>a. and s.</td>
<td>Dover.</td>
<td></td>
</tr>
<tr>
<td>Hall, Irene Marguerite,</td>
<td>14</td>
<td>a. and s.</td>
<td>Rochester.</td>
<td></td>
</tr>
<tr>
<td>Hanson, Dorothy,</td>
<td>17</td>
<td>a. and s.</td>
<td>Franklin.</td>
<td></td>
</tr>
<tr>
<td>Harvell, Ralph Burbank,</td>
<td>18</td>
<td>aqi.</td>
<td>Laconia.</td>
<td></td>
</tr>
<tr>
<td>Haseltine, Franklin Lowell,</td>
<td>40</td>
<td>aqi.</td>
<td>Reed's Ferry.</td>
<td></td>
</tr>
<tr>
<td>Henchman, Russell Bunce,</td>
<td>18</td>
<td>e. e.</td>
<td>East Jaffrey.</td>
<td></td>
</tr>
<tr>
<td>Hickey, John Rodden,</td>
<td>18</td>
<td>a. and s.</td>
<td>East Rochester.</td>
<td></td>
</tr>
<tr>
<td>Higgins, Nelson Daniel,</td>
<td>13</td>
<td>m. e.</td>
<td>Littleton.</td>
<td></td>
</tr>
<tr>
<td>Hoagland, Gladys,</td>
<td>29</td>
<td>a. and s.</td>
<td>Stow, Mass.</td>
<td></td>
</tr>
<tr>
<td>Hobbs, Earle Osborne,</td>
<td>8</td>
<td>c. e.</td>
<td>Hallowell, Me.</td>
<td></td>
</tr>
<tr>
<td>Hoffman, Frances Armstrong,</td>
<td>9</td>
<td>a. and s.</td>
<td>Orange, N. J.</td>
<td></td>
</tr>
<tr>
<td>Hoffman, Louis Benjamin,</td>
<td>16</td>
<td>e. e.</td>
<td>Manchester.</td>
<td></td>
</tr>
<tr>
<td>Horne, Chester Arthur,</td>
<td>18</td>
<td>a. and s.</td>
<td>Rochester.</td>
<td></td>
</tr>
<tr>
<td>Howard, Maurice Wilbur,</td>
<td>17</td>
<td>a. and s.</td>
<td>Lebanon.</td>
<td></td>
</tr>
<tr>
<td>Hunt, Cyril Thomas,</td>
<td>18</td>
<td>c. e.</td>
<td>Cornish Flat.</td>
<td></td>
</tr>
<tr>
<td>Hyde, Margaret Warren,</td>
<td>17</td>
<td>h. e.</td>
<td>North Salem.</td>
<td></td>
</tr>
<tr>
<td>Johnson, Ethel Pearl,</td>
<td>17</td>
<td>h. e.</td>
<td>North Stratford.</td>
<td></td>
</tr>
<tr>
<td>Johnson, Maurice Harold,</td>
<td>16</td>
<td>e. e.</td>
<td>Manchester.</td>
<td></td>
</tr>
<tr>
<td>Joy, Frank Adin,</td>
<td>18</td>
<td>m. e.</td>
<td>Newfields.</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Hours' Credit</td>
<td>Course</td>
<td>P. O. Address</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>--------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>Kelleher, Mary Ethel</td>
<td>17</td>
<td>a. and s.</td>
<td>Dover</td>
<td></td>
</tr>
<tr>
<td>Kemp, Alice Bowdoin</td>
<td>17</td>
<td>h. e.</td>
<td>Kingston</td>
<td></td>
</tr>
<tr>
<td>Knight, Harold Carleton</td>
<td>17</td>
<td>a. and s.</td>
<td>East Jaffrey</td>
<td></td>
</tr>
<tr>
<td>Landers, Chester Bertrand</td>
<td>8</td>
<td>c. e.</td>
<td>Derry Village</td>
<td></td>
</tr>
<tr>
<td>Landry, Timothy</td>
<td>11</td>
<td>m. a. t.</td>
<td>Ludlow, Mass</td>
<td></td>
</tr>
<tr>
<td>Langley, Ada Caroline</td>
<td>17</td>
<td>a. and s.</td>
<td>Durham</td>
<td></td>
</tr>
<tr>
<td>McCarty, Mary Elizabeth</td>
<td>15</td>
<td>agi.</td>
<td>Ashuelot</td>
<td></td>
</tr>
<tr>
<td>Lewis, Marion Anna</td>
<td>17</td>
<td>h. e.</td>
<td>Littleton</td>
<td></td>
</tr>
<tr>
<td>Lovejoy, Ralph Locke</td>
<td>16</td>
<td>c. e.</td>
<td>Hollis</td>
<td></td>
</tr>
<tr>
<td>Lawson, Reuben Albert</td>
<td>18</td>
<td>a. and s.</td>
<td>Dover</td>
<td></td>
</tr>
<tr>
<td>MacDonald, Ray Archibald</td>
<td>9</td>
<td>e. e.</td>
<td>Manchester</td>
<td></td>
</tr>
<tr>
<td>McKenney, Alfred Edwin</td>
<td>12</td>
<td>m. e.</td>
<td>Westbrook, Me</td>
<td></td>
</tr>
<tr>
<td>Marshall, Barton Raymond</td>
<td>11</td>
<td>e. e.</td>
<td>Groveton</td>
<td></td>
</tr>
<tr>
<td>Martin, Leighton Linwood</td>
<td>18</td>
<td>a. and s.</td>
<td>White Rock, Me</td>
<td></td>
</tr>
<tr>
<td>Mathies, Carl Frederick</td>
<td>19</td>
<td>c. e.</td>
<td>Lawrence, Mass</td>
<td></td>
</tr>
<tr>
<td>Meader, Timothy Brackett</td>
<td>16</td>
<td>e. e.</td>
<td>Rochester</td>
<td></td>
</tr>
<tr>
<td>Mitchell, Richard A.</td>
<td>14</td>
<td>a. and s.</td>
<td>Epping</td>
<td></td>
</tr>
<tr>
<td>Moody, Alden Howard</td>
<td>19</td>
<td>c. e.</td>
<td>Concord</td>
<td></td>
</tr>
<tr>
<td>Mooney, Trevor</td>
<td>8</td>
<td>a. and s.</td>
<td>Littleton</td>
<td></td>
</tr>
<tr>
<td>Morgan, Delia Abbie</td>
<td>14</td>
<td>a. and s.</td>
<td>Berlin</td>
<td></td>
</tr>
<tr>
<td>Morgan, Lulu Denelda</td>
<td>15</td>
<td>agi.</td>
<td>Strafford</td>
<td></td>
</tr>
<tr>
<td>Morrison, Lewis Willard</td>
<td>11</td>
<td>m. e.</td>
<td>Penacook</td>
<td></td>
</tr>
<tr>
<td>Nightingale, Gordon T.</td>
<td>10</td>
<td>agi.</td>
<td>Colebrook</td>
<td></td>
</tr>
<tr>
<td>Noel, Edward Theodore</td>
<td>4</td>
<td>m. e.</td>
<td>Hampton</td>
<td></td>
</tr>
<tr>
<td>Noyes, David Drew</td>
<td>18</td>
<td>a. and s.</td>
<td>Pittsfield</td>
<td></td>
</tr>
<tr>
<td>Nudd, Willard Eugene</td>
<td>12</td>
<td>agi.</td>
<td>Colebrook</td>
<td></td>
</tr>
<tr>
<td>Osborne, Charles Roland</td>
<td>15</td>
<td>agi.</td>
<td>Newton</td>
<td></td>
</tr>
<tr>
<td>Owen, Wilfrid Lester</td>
<td>17</td>
<td>a. and s.</td>
<td>Dover</td>
<td></td>
</tr>
<tr>
<td>Page, Oral Allen</td>
<td>14</td>
<td>a. and s.</td>
<td>Claremont</td>
<td></td>
</tr>
<tr>
<td>Paul, Leslie Mathews</td>
<td>13</td>
<td>e. e.</td>
<td>Goffs Falls</td>
<td></td>
</tr>
<tr>
<td>Perkins, Caroline May</td>
<td>17</td>
<td>h. e.</td>
<td>Dover</td>
<td></td>
</tr>
<tr>
<td>Perron, Herbert Vincent</td>
<td>33</td>
<td>c. e.</td>
<td>Newmarket</td>
<td></td>
</tr>
<tr>
<td>Pinkham, Madeline Lona</td>
<td>16</td>
<td>a. and s.</td>
<td>Milton</td>
<td></td>
</tr>
<tr>
<td>Place, Palmer Bruce</td>
<td>17</td>
<td>a. and s.</td>
<td>Lebanon</td>
<td></td>
</tr>
<tr>
<td>Plummer, Dwight Hall</td>
<td>15</td>
<td>agi.</td>
<td>Center Strafford</td>
<td></td>
</tr>
<tr>
<td>Poland, Mary Flora</td>
<td>18</td>
<td>a. and s.</td>
<td>Pittsfield</td>
<td></td>
</tr>
<tr>
<td>Pratt, Oscar Boynton</td>
<td>17</td>
<td>a. and s.</td>
<td>Campton</td>
<td></td>
</tr>
<tr>
<td>Prescott, Frank Williams</td>
<td>16</td>
<td>m. a. t.</td>
<td>Concord</td>
<td></td>
</tr>
<tr>
<td>Randall; Christine Flora</td>
<td>14</td>
<td>a. and s.</td>
<td>Pawtucket, R. I</td>
<td></td>
</tr>
<tr>
<td>Reardon, John Joseph</td>
<td>15</td>
<td>a. and s.</td>
<td>Wheelright, Mass</td>
<td></td>
</tr>
<tr>
<td>Rector, Gordon</td>
<td>18</td>
<td>a. and s.</td>
<td>Dover</td>
<td></td>
</tr>
<tr>
<td>Revene, Marcus Royal</td>
<td>17</td>
<td>h. e.</td>
<td>Durham</td>
<td></td>
</tr>
</tbody>
</table>

STUDENT LIST.

195
<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robinson, Joseph Howard</td>
<td>18 m. e.</td>
<td></td>
<td>Pembroke</td>
</tr>
<tr>
<td>Rogers, Walter Eugene</td>
<td>6 a. and s.</td>
<td></td>
<td>Sanbornville</td>
</tr>
<tr>
<td>Rowe, Gilman Shaw</td>
<td>14 agi.</td>
<td></td>
<td>Exeter</td>
</tr>
<tr>
<td>Rowell, Harry Ellsworth</td>
<td></td>
<td>agi.</td>
<td>Lancaster</td>
</tr>
<tr>
<td>Rumrill, Hamilton</td>
<td>18 m. a. t.</td>
<td></td>
<td>Hillsborough</td>
</tr>
<tr>
<td>Russ, Clarence Kendall</td>
<td>m. e.</td>
<td></td>
<td>Hopkinton</td>
</tr>
<tr>
<td>Sanders, Miriam Augusta</td>
<td>17 h. e.</td>
<td></td>
<td>Granite</td>
</tr>
<tr>
<td>Seawards, Susie Ethel</td>
<td>17 h. e.</td>
<td></td>
<td>Dover</td>
</tr>
<tr>
<td>Sewall, Frank Albert</td>
<td></td>
<td>e. e.</td>
<td>Newmarket</td>
</tr>
<tr>
<td>Shedd, Hazelle Maud</td>
<td>17 h. e.</td>
<td></td>
<td>Rochester</td>
</tr>
<tr>
<td>Shillaber, John James</td>
<td>16 m. e.</td>
<td></td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Shirley, Ralph Wellington</td>
<td>18 agi.</td>
<td></td>
<td>Fryeburg, Me.</td>
</tr>
<tr>
<td>Shuttleworth, Melba J.</td>
<td>17 a. and s.</td>
<td></td>
<td>West Springfield, Mass.</td>
</tr>
<tr>
<td>Shuttleworth, William E.</td>
<td>18 agi.</td>
<td></td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Simpson, Earl Edward</td>
<td></td>
<td>e. e.</td>
<td>Littleton</td>
</tr>
<tr>
<td>Smith, Gertrude May</td>
<td>16 h. e.</td>
<td></td>
<td>Newfields</td>
</tr>
<tr>
<td>Smith, Howard Bruce</td>
<td>15 e. e.</td>
<td></td>
<td>Newport</td>
</tr>
<tr>
<td>Smith, Ivan Robinson</td>
<td>12 agi.</td>
<td></td>
<td>Hudson</td>
</tr>
<tr>
<td>Soper, Otis Edmund</td>
<td>15 e. e.</td>
<td></td>
<td>Nashua</td>
</tr>
<tr>
<td>Spencer, Franklin Hiram</td>
<td>16 e. e.</td>
<td></td>
<td>Cumberland Mills, Me.</td>
</tr>
<tr>
<td>Stafford, Henry Walton</td>
<td>15 e. e.</td>
<td></td>
<td>Berlin</td>
</tr>
<tr>
<td>Stafford, John Fremont</td>
<td>11 a. and s.</td>
<td></td>
<td>Berlin</td>
</tr>
<tr>
<td>Steeves, Lawrence Eugene</td>
<td>15 agi.</td>
<td></td>
<td>Strafford</td>
</tr>
<tr>
<td>Stevens, Ruth Lee</td>
<td>17 h. e.</td>
<td></td>
<td>Franconia</td>
</tr>
<tr>
<td>Strain, Murray Hartshorn</td>
<td>15 e. e.</td>
<td></td>
<td>Groveton</td>
</tr>
<tr>
<td>Sutherland, Christine Jane</td>
<td>17 h. e.</td>
<td></td>
<td>Plymouth</td>
</tr>
<tr>
<td>Tanzi, Ernest Carlos</td>
<td>c. e.</td>
<td></td>
<td>Hanover</td>
</tr>
<tr>
<td>Thompson, Charles Crawford</td>
<td>18 m. e.</td>
<td></td>
<td>Atkinson</td>
</tr>
<tr>
<td>Thompson, William Haven, Jr.</td>
<td>c. e.</td>
<td></td>
<td>Atkinson</td>
</tr>
<tr>
<td>Tilton, Lewis Blake</td>
<td>15 agi.</td>
<td></td>
<td>East Kingston</td>
</tr>
<tr>
<td>Wakefield, Clement Arthur</td>
<td>18 e. e.</td>
<td></td>
<td>Biddeford, Me.</td>
</tr>
<tr>
<td>Wallace, Stephen R. A.</td>
<td>a. and s.</td>
<td></td>
<td>Newmarket</td>
</tr>
<tr>
<td>Welch, Mary Louise</td>
<td>a. and s.</td>
<td></td>
<td>Newport</td>
</tr>
<tr>
<td>Wetherbee, Emma Louise</td>
<td>17 h. e.</td>
<td></td>
<td>Milford</td>
</tr>
<tr>
<td>Wheeler, William Crawford</td>
<td>15 agi.</td>
<td></td>
<td>Starrking</td>
</tr>
<tr>
<td>White, Alpheus Britton</td>
<td>17 a. and s.</td>
<td></td>
<td>Peterborough</td>
</tr>
<tr>
<td>Wiggin, Ida Marion</td>
<td>17 h. e.</td>
<td></td>
<td>Dover</td>
</tr>
<tr>
<td>Wildes, Karl Leland</td>
<td>18 e. e.</td>
<td></td>
<td>Belmont</td>
</tr>
<tr>
<td>Williams, Katherine</td>
<td>17 h. e.</td>
<td></td>
<td>Exeter</td>
</tr>
<tr>
<td>Wood, Margaret Aline</td>
<td>14 a. and s.</td>
<td></td>
<td>Haverhill</td>
</tr>
<tr>
<td>Young, Mabel Culver</td>
<td>h. e.</td>
<td></td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Young, Roland Jesse</td>
<td>12 a. and s.</td>
<td></td>
<td>Berlin</td>
</tr>
</tbody>
</table>
# STUDENT LIST.

## SPECIALS.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bissell, Ralph H.</td>
<td>86½ m. a. t.</td>
<td></td>
<td>Keene.</td>
</tr>
<tr>
<td>Boomer, Marjory R.,</td>
<td>10 a. and s.</td>
<td></td>
<td>Dover.</td>
</tr>
<tr>
<td>Davis, Otto Winfred,</td>
<td>18 agi.</td>
<td></td>
<td>Concord.</td>
</tr>
<tr>
<td>Gray, Ernest Lenwood,</td>
<td>18 c. e.</td>
<td></td>
<td>So. Berwick, Me.</td>
</tr>
<tr>
<td>Jones, Paul Taggart,</td>
<td>18 agi.</td>
<td></td>
<td>Tilton, Mass.</td>
</tr>
<tr>
<td>Kargas, Dionysios D.,</td>
<td>18 e. e.</td>
<td></td>
<td>Dover.</td>
</tr>
<tr>
<td>McGregor, Herbert Lynn,</td>
<td>12 e. e.</td>
<td></td>
<td>Haverhill, Mass.</td>
</tr>
<tr>
<td>Main, Harold Crawford,</td>
<td>54 a. and s.</td>
<td></td>
<td>Dover.</td>
</tr>
<tr>
<td>Paul, George Boss,</td>
<td>54 a. and s.</td>
<td></td>
<td>Dover.</td>
</tr>
<tr>
<td>Russell, Frances Elizabeth,</td>
<td>54 a. and s.</td>
<td></td>
<td>Somersworth.</td>
</tr>
<tr>
<td>Scott, Sue</td>
<td>21 a. and s.</td>
<td></td>
<td>Durham.</td>
</tr>
<tr>
<td>Varney, Wallace Gallinger,</td>
<td>34½ a. and s.</td>
<td></td>
<td>Dover.</td>
</tr>
</tbody>
</table>

## SECOND YEAR TWO-YEAR AGRICULTURE.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, Eloi Augustus,</td>
<td>64</td>
<td>Wellesley, Mass.</td>
</tr>
<tr>
<td>Andrew, Neal Davis,</td>
<td>62</td>
<td>Littleton.</td>
</tr>
<tr>
<td>Bassett, George Albert,</td>
<td>58</td>
<td>Fremont.</td>
</tr>
<tr>
<td>Bennett, Ellwood Vance,</td>
<td>54</td>
<td>Laconia.</td>
</tr>
<tr>
<td>Brackett, Edwin Labaree,</td>
<td>69</td>
<td>Dover.</td>
</tr>
<tr>
<td>Callender, Robert Stebbins,</td>
<td>61</td>
<td>Bethlehem.</td>
</tr>
<tr>
<td>Carleton, Dwight Edward,</td>
<td>61</td>
<td>Lancaster.</td>
</tr>
<tr>
<td>Colby, Charles Henry,</td>
<td>58</td>
<td>Franconia.</td>
</tr>
<tr>
<td>Corliss, Haven Ellmey,</td>
<td>48</td>
<td>Lakeport.</td>
</tr>
<tr>
<td>Crowley, Carl Elmer,</td>
<td>58</td>
<td>Ashland.</td>
</tr>
<tr>
<td>Cutting, Adna James,</td>
<td>60</td>
<td>Orford.</td>
</tr>
<tr>
<td>Davis, Clark Edwin,</td>
<td>63</td>
<td>Salem Depot.</td>
</tr>
<tr>
<td>Eastman, Harold Lowell,</td>
<td>63</td>
<td>Concord.</td>
</tr>
<tr>
<td>Elam, George Henry,</td>
<td>53</td>
<td>East Canterbury.</td>
</tr>
<tr>
<td>Goodrich, Arthur Ernest,</td>
<td>56</td>
<td>Wolfeboro.</td>
</tr>
<tr>
<td>Gould, Chester Earle,</td>
<td>64</td>
<td>Newton Junction.</td>
</tr>
<tr>
<td>Green, Sidney James,</td>
<td>79</td>
<td>Munsonville.</td>
</tr>
<tr>
<td>Griffith, Carroll Potter,</td>
<td>43</td>
<td>Tamworth.</td>
</tr>
<tr>
<td>Harling, Davis Herbert,</td>
<td>61</td>
<td>Jaffrey.</td>
</tr>
<tr>
<td>Harlow, John Joseph,</td>
<td>53</td>
<td>North Easton.</td>
</tr>
<tr>
<td>Hughes, Elmer Cutting,</td>
<td>59</td>
<td>Ashland.</td>
</tr>
<tr>
<td>Hunt, Harold Fay,</td>
<td>52</td>
<td>Lebanon.</td>
</tr>
<tr>
<td>Huntington, Lester William,</td>
<td>42</td>
<td>Henniker.</td>
</tr>
</tbody>
</table>
Name. | Hours' Credit. | P. O. Address.
--- | --- | ---
Irvine, William Henry, | 49 | Exeter.
Joslyn, Elwyn Duane, | 62 | Durham.
Low, Wesley Dutton, | 48 | Derry.
Megrath, William A., | 66 | Loudon.
Merrill, Dean Bixby, | 57 | North Sutton.
Norman, Edward James, | 60 | Lee, Mass.
Norris, Raymond Alan, | 61 | East Derry.
Olson, Oscar Sigfred, | 60 | Concord.
Poland, Charles Wesley, | 62 | Lebanon.
Redden, Dennis Christopher, | 75 | Dover.
Russell, Kenneth Samuel, | 60 | Exeter.
Schoolcraft, Allen Hyde, | 60 | Cheever.
Scovell, Charles Maxwell, | 42 | Haverhill, Mass.
Smith, Herbert Arthur, | 56 | Newfields.
Sutherland, Aretas B., | 53 | Plymouth.
Swett, Harold Franklin, | 57 | Andover.
Tootill, Philip Angus, | 39 | Grafton.
Turner, Ralph Henry, | 56 | East Jaffrey.
Turner, Raymond Leavitt, | 63 | North Reading, Mass.
Whitcomb, Harlan J., | 56 | Brookline.
Woodward, Joshua Loring, | 40 | Brookline, Mass.

**FIRST YEAR TWO-YEAR AGRICULTURE.**

Hours of credit are not computed for students unable, for various reasons, to complete the semester.

Abbott, Roland Webster, | 11 | Hudson.
Ames, Richard Caldwell, | 15 | North Easton, Mass.
Ames, Roger Morrill, | 16 | Lakeport.
Andrew, Edwin John, | | Concord.
Bonardi, Harold Philip, | | Lebanon.
Bundy, Harold R., | 19 | Bethel, Vt.
Cate, Eben Woodman, | 19 | Laconia.
Cofran, Dustin Charles, | 19 | Manchester.
Colcord, John Edward, | 19 | Derry.
Currier, Richard Augustus, | | Lochmere.
Doyle, Peter James, | 19 | Hampton Falls.
Dudley, John, | | Raymond.
Eastman, James, | 16 | West Canaan.
Ellis, Joseph Harvey, | 19 | Somerville, Mass.
Emery, Ralph Benton, | 29 | Sanford, Me.
<table>
<thead>
<tr>
<th>Name</th>
<th>Hours’ Credit</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estabrook, Harold Prentiss,</td>
<td>7</td>
<td>Alstead</td>
</tr>
<tr>
<td>Farnham, John Leon,</td>
<td>19</td>
<td>North Haverhill</td>
</tr>
<tr>
<td>Felker, Clarence George,</td>
<td>16</td>
<td>Dover</td>
</tr>
<tr>
<td>Forbush, Cyril Winthrop,</td>
<td>19</td>
<td>Newton, Mass</td>
</tr>
<tr>
<td>Foss, Arthur Lester,</td>
<td>19</td>
<td>Tilton</td>
</tr>
<tr>
<td>Foss, Ralph Eugene,</td>
<td>19</td>
<td>South Berwick, Me.</td>
</tr>
<tr>
<td>French, Leo Copp,</td>
<td>15</td>
<td>Tilton</td>
</tr>
<tr>
<td>Friel, Michael James,</td>
<td>19</td>
<td>Pittsfield</td>
</tr>
<tr>
<td>Gilson, Henry Carl,</td>
<td>19</td>
<td>Windham</td>
</tr>
<tr>
<td>Golding, Norman Randall,</td>
<td>19</td>
<td>Biddeford, Me.</td>
</tr>
<tr>
<td>Gould, Walter,</td>
<td>18</td>
<td>Dunbarton</td>
</tr>
<tr>
<td>Holbrook, Holman Aresel,</td>
<td>13</td>
<td>Colebrook</td>
</tr>
<tr>
<td>Ireland, John Burnham,</td>
<td>19</td>
<td>Dunbarton</td>
</tr>
<tr>
<td>Jewett, Maurice Benjamin,</td>
<td>19</td>
<td>Laconia</td>
</tr>
<tr>
<td>Jones, Leon Charles,</td>
<td>19</td>
<td>Lancaster</td>
</tr>
<tr>
<td>Kenison, Darrel Ona,</td>
<td>19</td>
<td>StarKing</td>
</tr>
<tr>
<td>Kimball, Richard Henry,</td>
<td>13</td>
<td>Manchester</td>
</tr>
<tr>
<td>Leonard, George Wesley,</td>
<td>19</td>
<td>Piermont</td>
</tr>
<tr>
<td>Magoon, Kenneth Faunce,</td>
<td>19</td>
<td>Rochester</td>
</tr>
<tr>
<td>McIntyre, Grover Clifton,</td>
<td>19</td>
<td>Dover</td>
</tr>
<tr>
<td>Marshall, Chester Adams,</td>
<td>17</td>
<td>Lancaster</td>
</tr>
<tr>
<td>Martin, Horace Sawyer,</td>
<td>13</td>
<td>Warner</td>
</tr>
<tr>
<td>Merrill, Frank Henry,</td>
<td>16</td>
<td>Warren</td>
</tr>
<tr>
<td>Merrill, Henry Hubert,</td>
<td>19</td>
<td>Littleton</td>
</tr>
<tr>
<td>Merrill, Roger Moulton,</td>
<td>19</td>
<td>Hampton Falls</td>
</tr>
<tr>
<td>Meserve, Winthrop Emerson,</td>
<td>18</td>
<td>Durham</td>
</tr>
<tr>
<td>Miller, William Taylor,</td>
<td>15</td>
<td>Oil City, Penn.</td>
</tr>
<tr>
<td>Minot, George Cavis,</td>
<td>16</td>
<td>Bath</td>
</tr>
<tr>
<td>Moody, Franklin Crosby,</td>
<td>19</td>
<td>Greenland</td>
</tr>
<tr>
<td>Nutter, John William,</td>
<td>19</td>
<td>Woodsville</td>
</tr>
<tr>
<td>Parker, John Lloyd,</td>
<td>15</td>
<td>Hawley, Mass</td>
</tr>
<tr>
<td>Peterson, Albert,</td>
<td>19</td>
<td>Raymond</td>
</tr>
<tr>
<td>Petmezas, Constantin A.,</td>
<td>17</td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Prentiss, Fred Roberts,</td>
<td>18</td>
<td>Alstead</td>
</tr>
<tr>
<td>Ries, Waldo,</td>
<td>17</td>
<td>New York, N.Y.</td>
</tr>
<tr>
<td>Rose, Herbert Adams,</td>
<td>19</td>
<td>Andover, Mass.</td>
</tr>
<tr>
<td>Rounds, Ward Barton,</td>
<td>19</td>
<td>West Milan</td>
</tr>
<tr>
<td>Russell, Raymond Clarke,</td>
<td>10</td>
<td>Franklin</td>
</tr>
<tr>
<td>Sanborn, Morrill Joseph,</td>
<td>17</td>
<td>Rochester</td>
</tr>
<tr>
<td>Sargent, Paul Nelson,</td>
<td>13</td>
<td>East Kingston</td>
</tr>
<tr>
<td>Shaw, Herman Weare,</td>
<td>19</td>
<td>Exeter</td>
</tr>
<tr>
<td>Smalley, Maxwell William,</td>
<td>17</td>
<td>Walpole</td>
</tr>
<tr>
<td>Smith, Carl Davis,</td>
<td>19</td>
<td>Ashland</td>
</tr>
</tbody>
</table>
FIRST YEAR TWO-YEAR ENGINEERS:

Hours of credit are not computed for students unable, for various reasons, to complete the semester.

Bingham, George Hutchins, e. e. Manchester.  
Brien, Armand Alfred, 18 e. e. Manchester.  
Brown, Harvey Wm. D., e. e. Newport.  
Calef, Leon Chesley, 18 e. e. East Barrington.  
Clark, Walter Ellery, 18 e. e. Franklin.  
Comings, Joseph Taylor, 15 m. e. Exeter.  
Davis, Fred Norman, e. e. Rochester.  
Dearborn, Zelle Francis, 18 m. e. Epping.  
Erskine, Guy Harvey, 18 e. e. Manchester.  
Fellows, Weldon Harris, 18 e. e. Laconia.  
Fiske, Clarence Warren, 16 e. e. Dublin.  
Fletcher, Norman Waldo, 10 e. e. East Washington.  
Gallant, Albert Bissett, e. e. Newmarket.  
Gammons, Philip Ellis, e. e. Ashland.  
Garland, George Albion, e. e. Newington.  
Goodrich, Ransom Elmer, 18 m. e. Wolfeboro.  
Hardy, Robert Harrison, 18 e. e. Somerville, Mass.  
Johnson, Robert, 18 e. e. Manchester.  
Kendal, Herbert Brigham, Jr., m. e. Wolfeboro.  
Leavitt, Harold Dudley, 10 e. e. Lincoln.  
McReel, William Alexander, m. e. Exeter.  
Mitchell, Frederick Wm., 10 e. e. Dover.  
Ouellette, Eugene George, 18 e. e. Brookline.  
Page, True Ozro, m. e. Durham.  
Paine, Gardner Lloyd, 12 e. e. Berlin.  
Perkins, Frank Douglas, 12 e. e. Hampton Falls.  
Pettigrew, Herman Elroy, 13 e. e. Portsmouth.  
Potter, Francis Taylor, 18 e. e. Mountainview.  
Pratt, Harris Franklin, e. e. Center Barnstead.  
Roberts, Leon Lester, 18 e. e. Portsmouth.
### STUDENT LIST.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours' Credit</th>
<th>Course</th>
<th>P. O. Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rutledge, Bradley Gardner</td>
<td>m. e.</td>
<td></td>
<td>Portsmouth</td>
</tr>
<tr>
<td>Schoonmaker, Charles Jenkins</td>
<td>e. e.</td>
<td></td>
<td>Durham</td>
</tr>
<tr>
<td>Taylor, Warren Howard</td>
<td>10 m. e.</td>
<td></td>
<td>Stamford, Conn.</td>
</tr>
<tr>
<td>Twombly, Charles Whittier</td>
<td>e. e.</td>
<td></td>
<td>Center Strafford</td>
</tr>
<tr>
<td>Warren, Charles Libbey</td>
<td>18 m. e.</td>
<td></td>
<td>Wolfeboro</td>
</tr>
<tr>
<td>Watson, Wesley</td>
<td>18 e. e.</td>
<td></td>
<td>Manchester</td>
</tr>
<tr>
<td>Weigel, Frederick Albert</td>
<td>20 e. e.</td>
<td></td>
<td>Lawrence, Mass.</td>
</tr>
<tr>
<td>Woods, Harold Richmond</td>
<td>e. e.</td>
<td></td>
<td>Epping</td>
</tr>
<tr>
<td>Woodward, Alfred Errol</td>
<td>11 e. e.</td>
<td></td>
<td>Monadnock</td>
</tr>
</tbody>
</table>

### WINTER SHORT COURSES.

- Ames, Herbert Thurlow, Lakeport
- Atwood, Mrs. Harry, Newfields
- Brackett, T. J., Greenland
- Burpee, L. B., Exeter
- Cate, Thomas Jefferson, Chester
- Chamberlin, James S., Durham
- Chamberlin, Mrs. James S., Durham
- Colby, Clarence Elmer, Manchester
- Corey, Harvey D., Brookline
- Dalrymple, Raymond James, West Hopkinton
- DeLaney, Miss Stella, Durham
- Dow, Albert N., Exeter
- Estes, Charles L., Somersworth
- Hall, Albert I., Rochester
- Hayes, W. C., South Danbury
- Hoit, R. H., Granmere
- Horne, S. C., Somersworth
- Jordan, Farnum B., Saylesville, R. I.
- Keyser, Warren F., Bristol
- LeBaron, Mrs. Margaret, Manchester
- Madden, William John, Peterborough
- Miller, Walter Herbert, Methuen, Mass.
- Mitchell, Jerry, Durham
- Murphy, Frank P., West Kennebunk, Me.
- Parkman, Ruth Morton, Stratham
- Peaslee, Josephine L., Newton
- Perkins, Eugene Frederick, New London
- Peterson, Theodore, Raymond
- Rowell, Norman J., Newton
- Skinner, A. Louise, Stratham
- Upham, C. J., Amherst
- Upham, Mrs. C. J., Amherst
- York, Miss Effie, Plymouth
- Young, Merrill Aldrich, Walpole
### SUMMARY OF REGISTRATION 1915–1916.

<table>
<thead>
<tr>
<th></th>
<th>Agriculture</th>
<th>Engineering</th>
<th>Arts and Science</th>
<th>Men</th>
<th>Women</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seniors</td>
<td></td>
<td>7</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Juniors</td>
<td></td>
<td>4</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Sophomores</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Freshmen</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Total 4-year and Graduates</td>
<td>74</td>
<td>11</td>
<td>21</td>
<td>7</td>
<td>4</td>
<td>39</td>
</tr>
<tr>
<td>Total Divisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>1st year Two-year</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>2d year Two-year</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>47</td>
</tr>
<tr>
<td>Winter Short Courses</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>231</td>
<td>11</td>
<td>21</td>
<td>7</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>Totals by Divisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>274</td>
<td></td>
</tr>
<tr>
<td>One Week Course</td>
<td>325</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## INDEX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Hours</td>
<td>51</td>
</tr>
<tr>
<td>Administrative Officers</td>
<td>4</td>
</tr>
<tr>
<td>Admission:</td>
<td></td>
</tr>
<tr>
<td>Four-Year Courses:</td>
<td></td>
</tr>
<tr>
<td>By Credentials of Graduation</td>
<td>38</td>
</tr>
<tr>
<td>Examinations for</td>
<td>38, 40</td>
</tr>
<tr>
<td>Methods of</td>
<td>38</td>
</tr>
<tr>
<td>Requirements in Detail</td>
<td>41</td>
</tr>
<tr>
<td>Unit Requirements for</td>
<td>39</td>
</tr>
<tr>
<td>Two-Year Course in Agriculture</td>
<td>134</td>
</tr>
<tr>
<td>Two-Year Course in Industrial Engineering</td>
<td>136</td>
</tr>
<tr>
<td>Winter Short Courses</td>
<td>139</td>
</tr>
<tr>
<td>Aid to Students</td>
<td>17</td>
</tr>
<tr>
<td>Attendance at Convocation and Military Drill and Physical Culture Classes</td>
<td>18</td>
</tr>
<tr>
<td>Battalion Roster</td>
<td>183</td>
</tr>
<tr>
<td>Board</td>
<td>14</td>
</tr>
<tr>
<td>Buildings</td>
<td>20</td>
</tr>
<tr>
<td>Calendar</td>
<td>3</td>
</tr>
<tr>
<td>Courses Offered</td>
<td></td>
</tr>
<tr>
<td>Description of:</td>
<td></td>
</tr>
<tr>
<td>Four-Year Courses</td>
<td>33</td>
</tr>
<tr>
<td>Two-Year Course in Agriculture</td>
<td>134</td>
</tr>
<tr>
<td>Two-Year Course in Industrial Engineering</td>
<td>146</td>
</tr>
<tr>
<td>Post-Graduate and Special Courses</td>
<td>38</td>
</tr>
<tr>
<td>Winter Short Courses</td>
<td>139</td>
</tr>
<tr>
<td>Schedules of:</td>
<td></td>
</tr>
<tr>
<td>Four-Year Courses</td>
<td>50</td>
</tr>
<tr>
<td>Two-Year Course in Agriculture</td>
<td>136</td>
</tr>
<tr>
<td>Two-Year Course in Industrial Engineering</td>
<td>147</td>
</tr>
<tr>
<td>Degrees:</td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>48</td>
</tr>
<tr>
<td>Conferred in 1915</td>
<td>177</td>
</tr>
<tr>
<td>Requirements for</td>
<td>49</td>
</tr>
<tr>
<td>Description of Studies:</td>
<td></td>
</tr>
<tr>
<td>Four-Year Courses:</td>
<td></td>
</tr>
<tr>
<td>Agronomy</td>
<td>76</td>
</tr>
<tr>
<td>Animal Husbandry</td>
<td>78</td>
</tr>
<tr>
<td>Astronomy</td>
<td>80</td>
</tr>
<tr>
<td>Botany</td>
<td>80</td>
</tr>
<tr>
<td>Chemistry</td>
<td>81</td>
</tr>
<tr>
<td>Dairying</td>
<td>85</td>
</tr>
<tr>
<td>Drawing</td>
<td>87</td>
</tr>
<tr>
<td>Economics</td>
<td>90</td>
</tr>
<tr>
<td>Education</td>
<td>92</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>95</td>
</tr>
<tr>
<td>English</td>
<td>98</td>
</tr>
<tr>
<td>Entomology</td>
<td>100</td>
</tr>
<tr>
<td>Forestry</td>
<td>101</td>
</tr>
<tr>
<td>French</td>
<td>103</td>
</tr>
<tr>
<td>Geology</td>
<td>104</td>
</tr>
<tr>
<td>German</td>
<td>105</td>
</tr>
<tr>
<td>History</td>
<td>107</td>
</tr>
<tr>
<td>Home Economics</td>
<td>108</td>
</tr>
</tbody>
</table>
### Four-Year Courses, continued.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horticulture</td>
<td>110</td>
</tr>
<tr>
<td>Latin</td>
<td>113</td>
</tr>
<tr>
<td>Mathematics</td>
<td>113</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>115</td>
</tr>
<tr>
<td>Meteorology</td>
<td>118</td>
</tr>
<tr>
<td>Military Science and Tactics</td>
<td>118</td>
</tr>
<tr>
<td>Mineralogy</td>
<td>121</td>
</tr>
<tr>
<td>Physical Culture</td>
<td>121</td>
</tr>
<tr>
<td>Physics</td>
<td>122</td>
</tr>
<tr>
<td>Political Science</td>
<td>123</td>
</tr>
<tr>
<td>Psychology</td>
<td>124</td>
</tr>
<tr>
<td>Shop Work</td>
<td>124</td>
</tr>
<tr>
<td>Sociology</td>
<td>127</td>
</tr>
<tr>
<td>Spanish</td>
<td>129</td>
</tr>
<tr>
<td>Zoology</td>
<td>129</td>
</tr>
</tbody>
</table>

### Two-Year Course in Agriculture:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy</td>
<td>137</td>
</tr>
<tr>
<td>Animal Husbandry</td>
<td>138</td>
</tr>
<tr>
<td>Botany</td>
<td>139</td>
</tr>
<tr>
<td>Chemistry</td>
<td>139</td>
</tr>
<tr>
<td>Dairying</td>
<td>139</td>
</tr>
<tr>
<td>Drawing</td>
<td>140</td>
</tr>
<tr>
<td>Economics</td>
<td>140</td>
</tr>
<tr>
<td>English</td>
<td>140</td>
</tr>
<tr>
<td>Entomology</td>
<td>141</td>
</tr>
<tr>
<td>Forestry</td>
<td>141</td>
</tr>
<tr>
<td>Horticulture</td>
<td>141</td>
</tr>
<tr>
<td>Mathematics</td>
<td>142</td>
</tr>
<tr>
<td>Military Science and Tactics</td>
<td>142</td>
</tr>
<tr>
<td>Physics</td>
<td>143</td>
</tr>
<tr>
<td>Shop Work</td>
<td>143</td>
</tr>
<tr>
<td>Sociology</td>
<td>144</td>
</tr>
<tr>
<td>Zoology</td>
<td>144</td>
</tr>
</tbody>
</table>

### Two-Year Course in Industrial Engineering:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>149</td>
</tr>
<tr>
<td>Economics</td>
<td>150</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>150</td>
</tr>
<tr>
<td>English</td>
<td>153</td>
</tr>
<tr>
<td>Mathematics</td>
<td>153</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>154</td>
</tr>
<tr>
<td>Military Science and Tactics</td>
<td>155</td>
</tr>
<tr>
<td>Physics</td>
<td>156</td>
</tr>
<tr>
<td>Physiology</td>
<td>157</td>
</tr>
<tr>
<td>Political Science</td>
<td>157</td>
</tr>
<tr>
<td>Shop</td>
<td>158</td>
</tr>
</tbody>
</table>

### Winter Short Courses:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Management and the Woodlot</td>
<td>160</td>
</tr>
<tr>
<td>Hay and Forage Crops</td>
<td>159</td>
</tr>
<tr>
<td>Orcharding</td>
<td>160</td>
</tr>
<tr>
<td>Poultry</td>
<td>160</td>
</tr>
<tr>
<td>Farmers’ Week Course</td>
<td>161</td>
</tr>
<tr>
<td>Dairy Course</td>
<td>161</td>
</tr>
<tr>
<td>Dairy Cattle</td>
<td>164</td>
</tr>
<tr>
<td>Dormitories</td>
<td>14</td>
</tr>
<tr>
<td>Equipment</td>
<td>23</td>
</tr>
</tbody>
</table>
# INDEX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenses:</td>
<td></td>
</tr>
<tr>
<td>Four-Year Courses</td>
<td>13</td>
</tr>
<tr>
<td>Two-Year Course in Agriculture</td>
<td>13</td>
</tr>
<tr>
<td>Winter Short Courses</td>
<td>159</td>
</tr>
<tr>
<td>Experiment Station:</td>
<td></td>
</tr>
<tr>
<td>Description of</td>
<td>165</td>
</tr>
<tr>
<td>Staff</td>
<td>8</td>
</tr>
<tr>
<td>Extension Service:</td>
<td></td>
</tr>
<tr>
<td>Description of</td>
<td>168</td>
</tr>
<tr>
<td>Staff</td>
<td>9</td>
</tr>
<tr>
<td>Faculty</td>
<td>5</td>
</tr>
<tr>
<td>Fees</td>
<td>14</td>
</tr>
<tr>
<td>Historical Sketch</td>
<td>10</td>
</tr>
<tr>
<td>Honor List</td>
<td>178</td>
</tr>
<tr>
<td>Map of Campus</td>
<td>Frontispiece</td>
</tr>
<tr>
<td>Military Department</td>
<td>19</td>
</tr>
<tr>
<td>Prizes:</td>
<td></td>
</tr>
<tr>
<td>Confirmed in 1914</td>
<td>181</td>
</tr>
<tr>
<td>Offered</td>
<td>16</td>
</tr>
<tr>
<td>Registration</td>
<td>18</td>
</tr>
<tr>
<td>Reports of Standing</td>
<td>18</td>
</tr>
<tr>
<td>Rooms</td>
<td>14</td>
</tr>
<tr>
<td>Scholarships</td>
<td>14</td>
</tr>
<tr>
<td>Senior Standing and Deficiencies</td>
<td>47</td>
</tr>
<tr>
<td>Situation</td>
<td>12</td>
</tr>
<tr>
<td>Student Advisers</td>
<td>50</td>
</tr>
<tr>
<td>Student List</td>
<td>186</td>
</tr>
<tr>
<td>Summary of Registration</td>
<td>202</td>
</tr>
<tr>
<td>Theses</td>
<td>47</td>
</tr>
<tr>
<td>Trustees</td>
<td>4</td>
</tr>
<tr>
<td>Tuition</td>
<td>14</td>
</tr>
<tr>
<td>Two-Year Course in Agriculture:</td>
<td></td>
</tr>
<tr>
<td>Admission to</td>
<td>134</td>
</tr>
<tr>
<td>Certificates Granted in 1915</td>
<td>178</td>
</tr>
<tr>
<td>Description of</td>
<td>134</td>
</tr>
<tr>
<td>Description of Studies</td>
<td>137</td>
</tr>
<tr>
<td>Expenses</td>
<td>135</td>
</tr>
<tr>
<td>Schedule of</td>
<td>136</td>
</tr>
<tr>
<td>Two-Year Course in Industrial Engineering:</td>
<td></td>
</tr>
<tr>
<td>Admission to</td>
<td>146</td>
</tr>
<tr>
<td>Description of</td>
<td>146</td>
</tr>
<tr>
<td>Description of Studies</td>
<td>149</td>
</tr>
<tr>
<td>Schedule</td>
<td>147</td>
</tr>
<tr>
<td>Warnings</td>
<td>18</td>
</tr>
<tr>
<td>Winter Short Courses</td>
<td></td>
</tr>
<tr>
<td>Agronomy, Animal Husbandry and Horticulture</td>
<td>159</td>
</tr>
<tr>
<td>Dairying</td>
<td>161</td>
</tr>
<tr>
<td>Farmers' Week</td>
<td>161</td>
</tr>
</tbody>
</table>