

Nov Scotia

Nova Scotia AGRICULTURAL COLLEGE



Calendar 1982-83

Seventy-Seventh Annual Calendar

OF THE
NOVA SCOTIA
AGRICULTURAL COLLEGE
TRURO

Under
The Nova Scotia Department
of Agriculture and Marketing

1982-83

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APPLICATION FOR ADMISSION TO THE **DEGREE** COURSES (1982)
NOVA SCOTIA AGRICULTURAL COLLEGE

Date

Name in full

Address Postal Code

Birthdate..... Telephone

Day Month Year

Citizenship: Canadian Other

If *not* Canadian: Country of birth

Immigration status

Date of entry (if in Canada now)

Names of Parents, Next of Kin, or Contact Person

Relationship to applicant

Address

High School: - from which you expect to graduate

or

- from which you graduated

If you were not in high school during the 1981-82 school year, what educational institution(s) have you attended since you were in high school?

Applications will not be considered until a complete transcript of high school marks has been submitted. Candidates who have attended a post-secondary institution(s) are also required to submit a complete transcript(s) of their record from there.

COURSE DESIRED (Indicate by check mark)

Degree in Agricultural Science [B.Sc. (Agr.)]

- Regular (First Year)
- Pre-Veterinary
- Advanced Standing

Degree in Agricultural Engineering [B.E. (Agr.)]

- First year
- Advanced Standing

Special (to take degree subjects)

In submitting this application form, I hereby agree to abide by the rules and regulations of the college.

Signature of Applicant

Signature of Parent or Guardian

(Required only if applicant is under 19.)

For TECHNICAL COURSES see page 2.

APPLICATION FOR ADMISSION TO THE **TECHNICAL COURSES** (1982)
NOVA SCOTIA AGRICULTURAL COLLEGE

Date

Name in full

Address

Postal Code

Birthdate..... Telephone

Day Month Year

Citizenship: Canadian Other

If *not* Canadian: Country of birth

Immigration status

Date of entry (if in Canada now).....

Names of Parents, Next of Kin, or Contact Person

Relationship to applicant

Address

High School: - from which you expect to graduate

or

- from which you graduated.....

If you were not in high school during the 1981-82 school year, what educational institution(s) have you attended since you were in high school?.....

Applications will not be considered until a complete transcript of high school marks has been submitted. Candidates who have attended a post-secondary institution(s) are also required to submit a complete transcript(s) of their record from there.

COURSE DESIRED (Indicate by check mark)

Pre-Tech Semester (January 1983).....

	First Year	Advanced Standing
Technician:		
Agricultural Business	<input type="checkbox"/>	<input type="checkbox"/>
Agricultural Mechanization	<input type="checkbox"/>	<input type="checkbox"/>
Animal Science	<input type="checkbox"/>	<input type="checkbox"/>
Farm Equipment	<input type="checkbox"/>	<input type="checkbox"/>
Plant Science	<input type="checkbox"/>	<input type="checkbox"/>
Special	<input type="checkbox"/>	<input type="checkbox"/>
Technology:		
Biology Laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Chemistry Laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Ornamental Horticulture	<input type="checkbox"/>	<input type="checkbox"/>
Farming	<input type="checkbox"/>	<input type="checkbox"/>
Agricultural	<input type="checkbox"/>	<input type="checkbox"/>

In submitting this application form, I hereby agree to abide by the rules and regulations of the college.

Signature of Applicant.....

Signature of Parent or Guardian

(Required only if applicant is under 19.)

For DEGREE COURSES see page 1.



1982 Calendar

S M T W T F S	S M T W T F S	S M T W T F S
JULY	AUGUST	SEPTEMBER
<p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30 31</p>	<p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30 31</p>	<p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30</p>
OCTOBER	NOVEMBER	DECEMBER
<p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p> <p>31</p>	<p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30</p>	<p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30 31</p>

1983 Calendar

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

Calendar for Session 1982-1983

1982

Sept. 1-3	Supplemental examinations.
Sept. 7	Registration for students registering for the first time.
Sept. 8	Registration for returning students.
Sept. 9	Lectures commence at 8:15 a.m.
October 11	Thanksgiving Day. No classes.
October 29	College Royal Showday. No classes.
Nov. 8	Long weekend. No classes.
Dec. 8-18	First semester examinations.

1983

January 4	Second semester lectures commence at 8:15 a.m. Registration for second semester and for pre-tech.
Feb. 21-25	Mid-term break for individual study.
April 1	Good Friday. No classes.
April 11-22	Second semester examinations.
May 4	Graduation exercises.

Officers of Administration

Principal

H.F. MacRAE, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)

Principal Emeritus

KENNETH COX, B.S.A. (Toronto), M.S.A. (McGill), L.L.D. (McGill)

Vice-Principal

I.M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)

Dean, Vocational and Technical Education

A.D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)

Registrar

P.Y. HAMILTON, B.Sc. (Agr.) (McGill), M.Sc. (Maine)

Librarian

B.S. SODHI, B.A. (Punjab), M.A. (Punjabi), Dip. L. Sc. (Punjab)

Dean of Students – Chaplain

REV. D.I. MacEACHERN, B.A. (Mt. Allison), M. Div. (Pine Hill)

Deans of Residence

J.M. SMITH, B.P.Ed. (Dalhousie)

P.R. WARMAN, B.Sc. (Agr.) (Rutgers), M.Sc. (Guelph), Ph.D. (Guelph)

K. GREENWOOD

Director of Athletics

K.S. MARCHANT, B.P. Ed. (New Brunswick), M.S. (Springfield)

Placement Officer

D.E. MacLEOD, B.A. (Dalhousie), B.Ed. (Acadia)

Business Manager

R.F. McEWAN

Secretary

MRS. A. MARIE HARTIGAN

Faculty

Principal

H.F. MacRAE, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)

Agricultural Engineering

JAMES ADAMS, B.Sc. (Strathclyde), M.Sc. (Reading)

Associate Professor

G.E. TOWNSEND, B.Sc. (Agr.) (McGill)

Assistant Professor

J.D. CUNNINGHAM, B.S.A. (Toronto), B.E. (Nova Scotia Technical College)

Assistant Professor

P.L. HAVARD, B.Sc. (Agr. Eng.)(McGill), M.Sc. (McGill)

Lecturer

P.F. RICHARD, B.Sc. (Agr. Eng.) (McGill)

Lecturer

Animal Science

L.M. COCK, B.Sc. (Agr.) (McGill), M.S. (Wisconsin), Ph.D. (Maine)

Professor

S.L. CURTIS, B.S.A. (Toronto), M.Sc. (Massachusetts), Ph.D. (Minnesota)

Associate Professor

P.Y. HAMILTON, B.Sc. (Agr.) (McGill), M.Sc. (Maine)

Associate Professor

W.C. MATHEWSON, B.Sc. (Agr.) (Aberdeen), D.T.A. (Trinidad), M.Sc. (Aberdeen)

Associate Professor

D.C. CROBER, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (British Columbia)

Associate Professor

D.M. ANDERSON, B.S.A. (Manitoba), M.Sc. (Manitoba), Ph.D. (Saskatchewan)

A.P. FORBES, B.S. (Animal and Veterinary Sciences) (Maine)

Lecturer

J.R. LONG, D.V.M. (Toronto), M.S. (Cornell), Ph.D. (Guelph)

Sessional Lecturer from N.S. Dept. of Agriculture and Marketing

G.W. CHANT, B.S.A. (Guelph)

Sessional Lecturer from N.S. Dept. of Agriculture and Marketing

Biology

L.A. McFADDEN, B.Sc. (Agr.) (McGill), M.Sc. (Cornell), Ph.D. (Cornell)
Professor

A.E. ROLAND, B.A. (Acadia), M.A. (Toronto), Ph.D. (Wisconsin), D.Sc. (Acadia), F.A.I.C.
Professor Emeritus

M.E. NEARY, B.Sc. (Agr.) (McGill)
Professor Emeritus

L.J. EATON, B.Sc. (Acadia), M.Sc. (Dalhousie)
Associate Professor

L.E. CROSBY, B.Sc. (Acadia), M.Sc. (Acadia)
Assistant Professor

R.K. PRANGE, B.Sc. (Acadia), M.Sc. (British Columbia), Ph.D. (Guelph)
Assistant Professor

G.W. STRATTON, B.Sc. (Agr.) (Guelph), M.Sc. (Guelph), Ph.D. (Guelph)
Assistant Professor

J.-P.R. LeBLANC, B.A. (Montreal), B.Sc. (Quebec), M.Sc. (McGill)
Lecturer

R.G. ROBERTSON, B.Sc. (For.) (Aberdeen)
Sessional Lecturer from N.S. Dept. of Lands and Forests

Chemistry

H.M. MacCONNELL, B.Sc. (Agr.) (McGill), M.Sc. (McGill)
Associate Professor

W.M. LANGILLE, B.Sc. (Acadia), M.Sc. (McGill)
Professor Emeritus

H.F. MacRAE, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)
Principal and Professor

K.S. MacLEAN, B.Sc. (Dalhousie), M.Sc. (McGill)
Associate Professor

A.S. PAYNE, B.Sc. (Agr.) (McGill), M.Sc. (McGill)
Associate Professor

A.R. ROBINSON, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)
Associate Professor

J.E. HAWLEY, B.Sc. (Agr.) (McGill)
Assistant Professor

P.R. WARMAN, B.Sc. (Agr.) (Rutgers), M.Sc. (Guelph), Ph.D. (Guelph)
Assistant Professor

Economics and Business Management

J.C. TAIT, B.Sc. (Agr.) (McGill), M.Sc. (New Hampshire)
Associate Professor

A.D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)
Associate Professor

D.E. ARNFAST, B.B.A. (St. Francis Xavier)
Assistant Professor

S.J.B. STACKHOUSE, B.Sc. (Agr. Ec.) (Guelph), M.Sc. (Guelph)
Assistant Professor

Humanities

K.S. MARCHANT, B.P.Ed. (New Brunswick), M.S. (Springfield)
Associate Professor

PARKER COX, B.A. (Acadia), M.A. (Toronto)
Professor Emeritus

REV. D.I. MacEACHERN, B.A. (Mt. Allison), M. Div. (Pine Hill)
Associate Professor

P.M. SANGER, B.A. (Melbourne), B.Ed. (Acadia), M.A. (Victoria)
Associate Professor

D.E. MacLEOD, B.A. (Dalhousie), B.Ed. (Acadia)
Assistant Professor

J.M. SMITH, B.P. Ed. (Dalhousie)
Lecturer

J.F. MILDON, B.A. (Sussex)
Sessional Lecturer

Mathematics and Physics

S.G. SMITH, B.Sc. (Mt. Allison), M.Sc. (Windsor)
Associate Professor

I.M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)
Associate Professor

V.L. SAXON, B.Sc. (Dalhousie), M.B.A. (Dalhousie), B.Ed. (Acadia), B.Eng. (N.S. Technical College)
Associate Professor

C.T. MADIGAN, B.Sc. (Windsor), M.Sc. (Windsor)
Associate Professor

R.V. BUCKLER, B.Sc. (Acadia), B.Ed. (Acadia)
Assistant Professor

Plant Science

J.S. BUBAR, B.Sc. (Agr.) (McGill), M.S. (Pennsylvania State), Ph.D. (McGill)
Professor

J.E. SHUH, B.S.A. (Toronto), M.Sc. (McGill)
Professor Emeritus

K. PADMANATHAN, B.Sc. (Madras), B.Sc. (Agr.) (Colombo), M.Sc. (Pennsylvania State), Ph.D. (Pennsylvania State)
Professor

R.W. DANIELS, B.Sc. (Agr.) (McGill), M.S. (Michigan State)
Associate Professor

T.H. HALIBURTON, B.Sc. (Agr.) (McGill), M.S. (Cornell)
Assistant Professor

W.J. HIGGINS, B.Sc. (Mt. Allison), M.S. in Ed. (Niagara)
Assistant Professor

H-Y. Ju, B.Sc. (Agronomy), (Seoul), M.Sc. (McGill), Ph.D. (McGill)
Assistant Professor

Schedule of Payments

The College reserves the right to make changes without notice in its published scale of charges for tuition, board and lodging, and other fees. Refunds will not be made except as stated below.

These charges are for the regular academic year. Students taking courses or projects in the summer period who use residence facilities will be charged for room and board at the rate of \$59 a week.

All payments are due on the dates stated.

Late registration is not permitted unless the circumstances are exceptional. When late registration is permitted, there is a penalty of \$20 for each day of lectures missed unless late registration is due to illness or other compelling compassionate reasons.

Students who intend to finance their education with Canada Student Loan funds but have not received their Certificate of Eligibility before registration must pay the required fee at registration time. Students should therefore arrange the necessary temporary financing before their arrival for registration.

Degree Courses

Payment due Sept. 7 (returning students Sept. 8), 1982

Tuition	\$ 420
Board and lodging	\$ 885
Caution, laboratory and key deposit	\$ 32
Students' Council and athletics	\$ 70
Medical fee	\$ 6
	\$1413

Books (estimated) \$ 175

Payment due January 4, 1983

Tuition	\$ 420
Board and lodging	\$ 990
	\$1410

Books (estimated) \$ 175

Every student registering for a chemistry course should purchase and use a laboratory coat.

Technician and Technologist Courses

Tuition is free to residents of the Atlantic Provinces; the governments of these provinces are sharing operating costs of the courses. For all other students, tuition fees are \$420 per semester.

Payment due Sept. 7 (returning students Sept. 8), 1982

Board and lodging	\$ 885
Caution, laboratory and key deposit	\$ 32
Students' Council and athletics	\$ 70
Medical fee	\$ 6
	\$ 993

Books (estimated) \$ 150

Payment due January 4, 1983

Board and lodging	\$ 990
Books (estimated)	\$ 150

The United Students' Council has approved a fee of \$6.00 for the medical services fund to be collected from all students at time of registration. The fund provides non-prescription drugs and other supplies for the infirmary. It will not provide for prescription drugs, hospitalization or operations. All doctor's services will be requested by the College Health Service.

Except for health or other compelling compassionate reasons, students who withdraw after three weeks from the commencement of classes will receive no refund of the tuition fee. The amount of the refund for students who withdraw within those three weeks will be 75% of the total tuition fee for a student who withdraws during the first week of classes, 50% for a student who withdraws during the second week, and 25% for a student who withdraws during the third week. Students who withdraw after the first two weeks of the term will receive a refund of the balance of their payment for board but no part of their payment for room rent. (The rate for room rent is \$19.00 per week.)

Students' Council and Medical Services fees will be refunded to students who withdraw during the first week of the academic year. After the first week there will be no refund except for a withdrawal for health or other compelling compassionate reasons. After a student has withdrawn, the Students' Medical Fund is not responsible for that person.

Residence Accommodations

Board and lodging facilities are available for male and female students. Students who wish to reserve a room are required to pay a deposit of \$25.00. Returning students must pay this before June 30 and new students when they receive their letter of admission to the College. The deposit will be credited to the student's board and lodging account.

The deposit will be refunded to any applicant for whom a room has been reserved but who finds it necessary to cancel the reservation, provided that notice of cancellation reaches the Registrar's Office not later than September 1.

Trueman House, Chapman House and Fraser House will be open as follows:

- after dinner on September 1 for students who have to write supplemental examinations
- after dinner on September 6 for all new students
- after dinner on September 7 for all other students

Any student who wishes to use residence facilities before these dates will be charged at the rate of \$9.00 a night.

Caution and Laboratory Deposit

Every student, at time of registration, must make a cash deposit of \$32.00 with the Registrar to cover breakage.

Damage to floors, walls, doors, windows, lighting or furniture in any bedroom will be charged to the occupants of the room in equal shares, and damage to the common parts of the College and residences will be charged to the entire student body if the offender is not charged and punished. The sum charged in any case will be in excess of the amount necessary to repair the damage.

All caution deposits are subject to a general levy through the office of the Dean of Students for breakage and damage to buildings and equipment that cannot be traced.

This fee, less deductions, will be refunded before the beginning of the next college year.

Financial Aid For Students

Canada Student Loans Plan

Eligible students enrolled in the Degree and Technical Courses can apply for Government of Canada loans and bursaries totaling more than \$3000 in one year. Application for a Certificate of Eligibility must be made to the issuing authority of the applicant's province of residence.

Borrowers under the plan are required to repay principal and pay interest, but no payments are required as long as they are full-time students at a specified post-secondary educational institution.

Application forms are available as follows:

Nova Scotia students	Department of Education Box 578 Halifax, N.S. B3J 2S9
New Brunswick students	Department of Youth Centennial Building Fredericton, N.B. E3B 5H1
Prince Edward Island students	Department of Education Box 2000 Charlottetown, P.E.I. C1A 7N8
Newfoundland students	Department of Education Confederation Building St. John's, Nfld. A1C 5R9

The application should be completed and filed with the issuing authority during the early summer, so that an eligibility form can be issued before Registration Day. The applicant then presents the Certificate of Eligibility at registration. Once it is signed by the Registrar, the student may take it to any bank to arrange for funds.

Living Allowance for Prince Edward Island Students

A living allowance of \$25.00 per week will be provided for Prince Edward Island students in good standing from Federal-Provincial funds if an application is made to the Director of Rural Development, Department of Agriculture and Forestry, Charlottetown, at as early a date as possible. Students who present a letter from this Department at registration indicating eligibility for assistance, are credited with the allowance.

Canadian Army Welfare Fund Bursaries

Bursaries of up to \$1,000 annually may be awarded to dependents of former members of the Canadian Army who enter the degree, technician, or technology courses at Nova Scotia Agricultural College.

Financial need is the determining factor in the selection of recipients.

Applications can be obtained from the Manager, Canadian Army Welfare Fund, East Memorial Building, Wellington Street, Ottawa, K1A 0P4.

Applications must be submitted by July 1.

Scholarships

Detailed information is given on pages 130-138.

General Information

Programs Offered

The Nova Scotia Agricultural College was formally opened in 1905 to assume and expand the work which for several years had been carried on by the School of Horticulture in Wolfville and the School of Agriculture in Truro. The College operates under the authority of an Act of the Legislature of Nova Scotia.

In 1980, NSAC received approval to offer all four years of the B.Sc. (Agr.) degree course. Expansion has begun and students who enter the college to begin the course in 1982 will be able to complete all four years at NSAC in one of the four options: Plant Science, Animal Science, Agricultural Economics and Plant Protection.

During the seventy-seven years of its existence, the College has had very close affiliations with the Ontario Agricultural College of the University of Guelph and Macdonald College of McGill University. Most of its graduates from the first two years of the degree course have completed their studies for a degree at these two institutions. Although most students now entering the program leading to a B.Sc.(Agr.) will complete their degree at NSAC, those who choose options not offered at the College can transfer without interruption to these institutions for the final two years of the program.

A wide range of courses are offered at NSAC besides those leading to a B.Sc.(Agr.). In 1982-83, the science degree in Agriculture, credits towards an engineering degree in Agriculture, a preveterinary course, five technician courses, five technology courses and numerous vocational short courses will be offered.

Students who take the one-year preveterinary course and are successful can apply for admission to the University of Guelph to continue in the course leading to Doctor of Veterinary Medicine. Those not admitted for the Veterinary program may enter the second year of the Agricultural Science Degree course at NSAC and proceed in the program leading to a B.Sc.(Agr.).

Graduates of the NSAC ^{Agricultural} pre-engineering course are admitted without further examination by the ~~Technical University of Nova Scotia~~ ⁱⁿ and Macdonald College of McGill University to complete their Bachelor of Engineering in Agricultural Engineering.

Students who wish to farm, to accept employment in a farm-related industry, or to engage in professional agriculture, can take college courses designed to better fit them for the line of endeavour they wish to follow.

Agriculture offers the alert person the widest possible field for study and opportunity. Its problems challenge the keenest minds. Agriculture also offers young people the possibility of a career that will bring opportunity for useful service and distinction.

Facilities

The Nova Scotia Agricultural College is located on a 550-acre property at Bible Hill, a mile northeast of Truro, Nova Scotia. The record of the College's graduates in the past 77 years is conclusive evidence that students can obtain a sound agricultural education in the courses offered.

The College buildings – Cumming Hall, Harlow Institute, Agricultural Engineering Building, Collins Horticultural Building, Cox Institute of Agricultural Technology, Boulden Building, Hancock Veterinary Building and a modern farm building complex – provide excellent teaching facilities for all subjects offered, and offices and laboratories for faculty and staff as well as for some of the staff of the Nova Scotia Department of Agriculture and Marketing. Fraser House, Trueman House, Chapman House and Jenkins Hall provide living and dining accommodations for male and female students. Recent additions include a complete and modern Athletic Centre, and an Alumni Theatre. A three-storey building, which will house an expanded, modern library, is now under construction.



The various courses arranged for the 1982-83 college year are listed and described in this Calendar. The Faculty reserves the right to make any necessary revisions and additions.

The Faculty reserves the right to withhold any first year courses for which less than five students apply.

The Faculty will give sympathetic consideration to any student who wishes to take a special selection of courses in order to fill a specific need. The choice of subjects will be limited to those that do not conflict when scheduled.

Students may write examinations in either of the two official languages of Canada.

Post Office Address

Nova Scotia Agricultural College, P.O. Box 550, Truro, N.S. B2N 5E3

Telephone

Nova Scotia Agricultural College, Truro, 902-895-1571

Banks

- The Bank of Nova Scotia
- The Bank of Montreal
- The Canadian Imperial Bank of Commerce
- The Royal Bank of Canada
- The Toronto-Dominion Bank
- The Bank of Montreal, Bible Hill

Telegrams

Offices of Canadian National-Canadian Pacific Telecommunications are located in Truro.

Address all telegrams in care of: Nova Scotia Agricultural College, Truro, N.S.

Express and Freight

Express or freight may be forwarded to the Nova Scotia Agricultural College by either the Canadian National Railways or the Canadian Pacific Railways; both lines maintain offices in Truro.

College Colors

Royal Blue and Regular Gold

Churches

Churches representing a wide range of denominational interests are located in Truro and Bible Hill.

Chaplaincy

Rev. Douglas MacEachern is Chaplain and Dean of Students. He works in close co-operation with the Executive of the United Students' Council and the Chapel Committee. The Chaplaincy is concerned with the spiritual needs of the students and the development of a religious program, often in conjunction with churches in the community.

Student Placement Service

The Nova Scotia Agricultural College provides facilities and personnel to assist graduates and undergraduates to obtain part-time, summer, and permanent employment.

The Placement Officer contacts representatives of industry, business and government to arrange for on- and off-campus recruitment of students.

Individual counselling related to career planning and employment information associated with agriculture is available. Students are informed of employment opportunities in the College newspaper and by notices circulated on bulletin boards at various locations on campus. Information on career planning and potential employers is also available at the Placement Office and College Library.

Student Government

Through a system of self-government, students are encouraged to accept the greatest possible amount of responsibility in connection with their own affairs. Only full-time students taking regular courses are allowed to act as executive members of the United Students' Council or as members of student committees.

A committee of Faculty members, appointed by the Faculty to act in an advisory capacity, cooperates with student committees on financial, literary, social and athletic affairs so that every possible benefit may be derived from these activities.

Student Activities

College Royal Winter Fair

Each College year, the students put on a College Winter Fair, or College Royal as it is frequently called. The show is a competition in fitting and showmanship rather than in the quality of the horses, cattle, sheep, swine and poultry shown in the exhibition.

Besides livestock classes, the show also features competition in agronomy, horticulture and farm management, and a series of educational demonstration booths.

The program and show are administered and operated by students.

Animal Science Club

Students interested in animal studies are welcome to join and take part in the Animal Science Club. The activities of this student-operated club include visits to livestock operations, meetings, livestock evaluation studies and competitions. Special guests are also invited to speak on livestock topics.

A major project of the club is the selection and training of a livestock evaluation team to take part in the livestock evaluation competition at the Royal Winter Fair in Toronto.

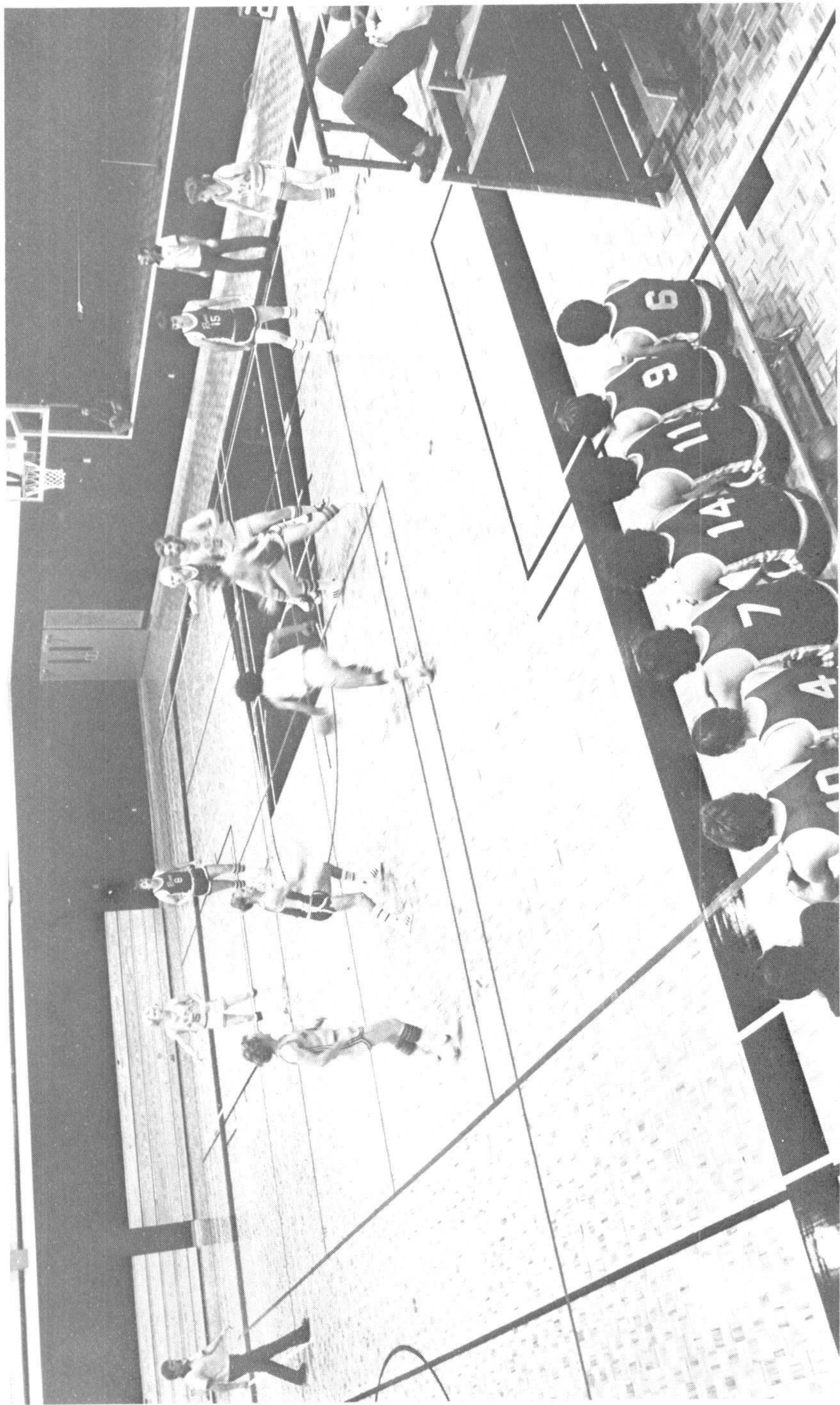
Social Activities

All social activities on the campus are supervised by a committee appointed by the United Students' Council. Informal dances and other social functions are held from time to time.

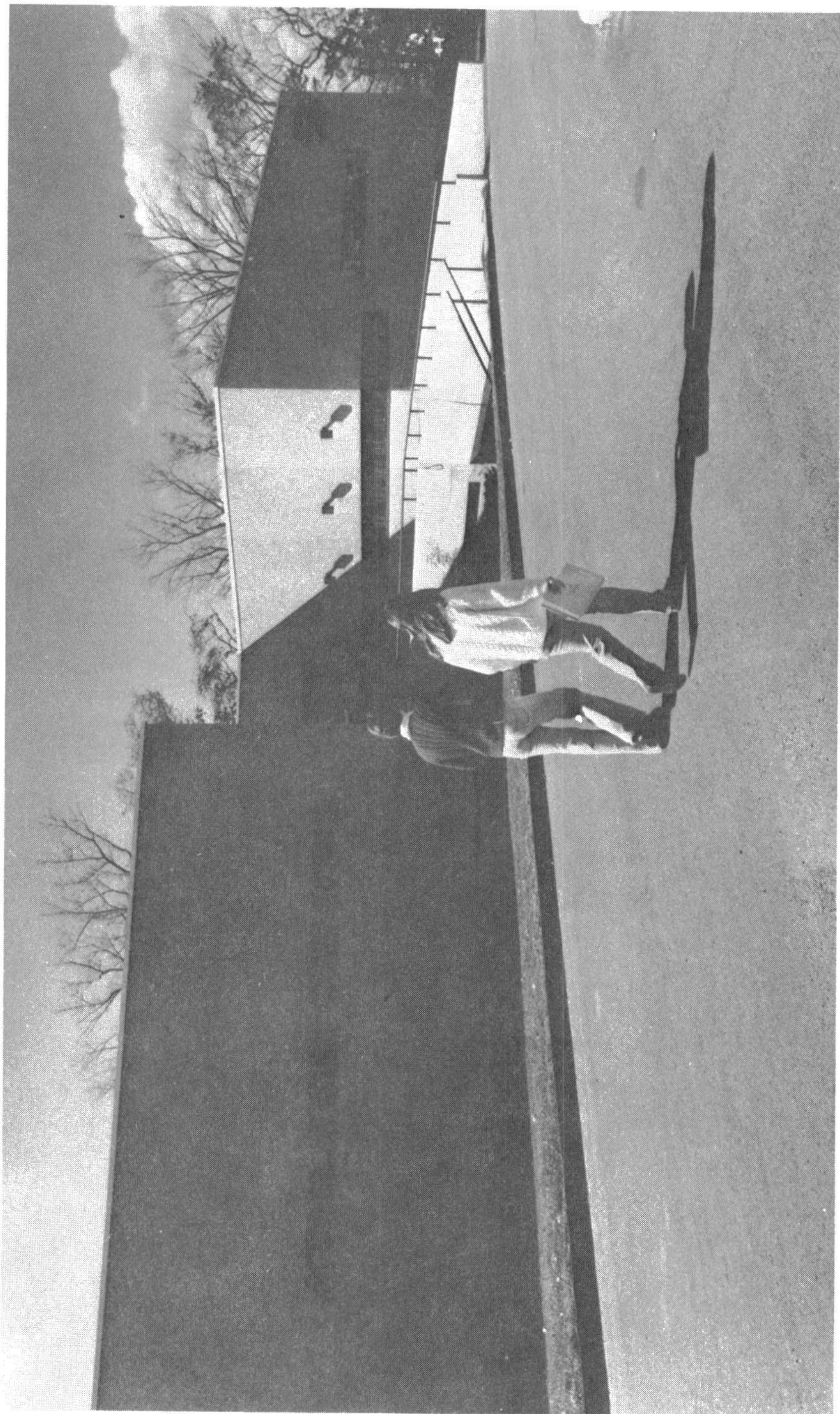
Athletics

The athletic program involves:

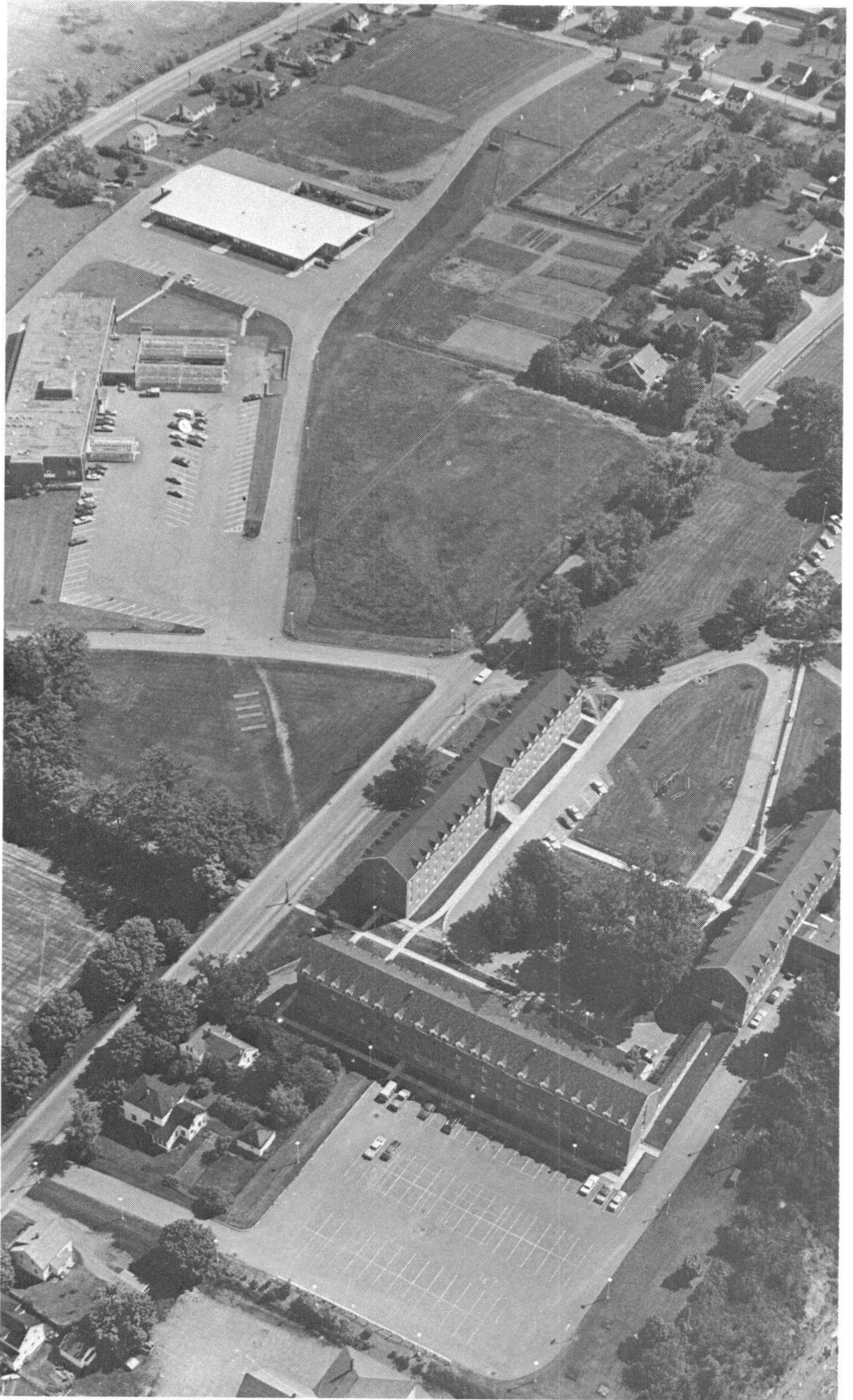
- Intramural athletics. The intramural program continues through the year with units of competition including softball, soccer, hockey, basketball, volleyball, badminton, curling, table tennis, racquetball, squash, handball, and cross-country skiing. Competition may be by class or residence floor, by a league draft system or co-ed.
- Intercollegiate athletics. The men's and women's divisions of athletics compete in the Nova Scotia College Conference. Field hockey, soccer, volleyball, basketball, hockey and badminton are the major team sports of this five-team league. The College is a member of the Canadian Colleges Athletic Association, a national body promoting competition for non-degree granting colleges. The College also competes in annual Woodsmen meets at the University of New Brunswick and Macdonald College.



Action in the Double Gym, NSAC.







Residences and Cox Institute

Rules and Regulations

General Regulations

All students are under the charge of the Principal and are responsible to him at all times for their conduct. The Principal is authorized to make any additional regulations found necessary for the discipline of the College and to impose fines or other penalties for any infraction of rules and regulations.

All students are expected to attend all lectures and laboratory periods in the subjects for which they are registered whether scheduled on the timetable or announced by the instructor. Members of the Faculty believe that a student should miss as few instructional periods as possible.

Students wishing to absent themselves from classes for compassionate reasons must obtain permission from the Registrar or, in his absence, from the Dean of Students.

A student who arrives late for class may be refused admission.

A student may, at the discretion of the instructor, be permitted to audit a course. The privilege may be withdrawn by the instructor at any time while the course is in progress. Students who are granted auditing privileges are not permitted to write tests, examinations or to be otherwise evaluated in the course audited.

All illness must be reported through the nurse to the Registrar's Office.

Tampering with fire protection equipment is forbidden.

Students must not destroy, deface, or meddle with College property.

Every student is expected to show, both within and without the College, such respect for order, morality and the rights of others and such sense of personal honour as is demanded of good citizens. Students found guilty of immoral, dishonest or improper conduct, violation of rules, or failure to make satisfactory progress, shall be liable to College discipline, including: suspension from classes or residence, disqualification from competing for honours or prizes, or expulsion from the College.

Smoking is not allowed in classrooms or laboratories during regular class and laboratory hours or in the dining areas, the Library, the Athletic Centre, or the Alumni Theatre at any time.

Any form of disorderly conduct, drunkenness, or public display of intoxicating beverages is forbidden on campus and at all College functions.

Firearms that are to be kept on campus must be left at the owner's risk in the custody of the Dean of Students.

Students are required to participate in approved orientation activities. All forms of initiation and hazing are forbidden.

Students found in unauthorized places on campus may be subject to immediate expulsion.

Residence Regulations

Residence regulations are to be found in the Student Handbook, which is distributed to all students.

Students living out of residence must obey all residence rules and regulations while visiting in the residences.

Students are required to provide their own towels, soap and drinking glass. Sheets, pillow, pillow cases, blankets and furniture will be provided by the College.

Students wishing accommodation for overnight visitors in a residence must obtain permission from the Dean of Students.

Single meals may be purchased by paying the cashier at the front end of the cafeteria line.

Use of Motor Vehicles

Operation of a motor vehicle while in residence is a privilege that may be withdrawn at the discretion of the Principal.

Traffic and Parking Regulations

Any member of the College community – faculty, staff or student – who brings a vehicle on campus must have it registered.

Students must register vehicles at registration. At that time, they receive a sticker that is to be displayed on the lower right hand corner of the rear window of the vehicle. A \$10.00 fee is charged for registration. Vehicles brought to campus during the year must be registered with the Traffic Control Committee.

Off-campus students bringing vehicles to the campus must register their vehicles and park in their designated area. They are subject to the same regulations as on-campus students.

Faculty and staff can obtain registration forms and stickers from the Traffic Control Committee.

The parking areas which are to be used are noted on campus maps and by signs at parking locations.

On-campus student parking areas are located behind Chapman House and beside the poultry building. All other areas which comprise the NSAC area are off limits to in-residence student parking.

The parking and traffic regulations are enforced by the Traffic Control Committee, Resident Deans, Grounds Superintendent and Student Monitors.

Vehicles parked in unauthorized areas are towed away at the owner's expense.

Medical

All candidates who are accepted will be sent a medical report form; those who do not receive one in the letter of final acceptance should ask for one. At registration, new students must have a completed medical report form dated not more than 30 days before registration. If required, students must submit to further medical examinations.

Students on holiday or accepted candidates for admission who contract any contagious or infective disease, or who reside in any dwelling in which any such disease exists, are subject to quarantine regulations approved by the medical profession. A medical certificate is required from any student or accepted candidate for admission who has suffered from, or come in contact with those suffering from, any contagious or infective disease before he/she is allowed to return to the College.

Athletic Regulations

All students are eligible to play for teams representing the College, subject to conditions established by the NSAC and the Canadian Colleges Athletic Association.

All teams or groups that go to any community or institution to participate in athletic activities must be accompanied by a member of the College staff.

A student wishing to participate in athletics other than those sponsored by the College must apply in writing to, and obtain permission from, the Principal before participating either as a player or an official.

Any expenses incurred through injury while playing in outside games are the responsibility of the student concerned, and not the responsibility of the students' medical fund.

Students who lose time from classes due to participating in outside games will not receive an attendance credit for the time lost.

Summary of Academic Programs

Agricultural Science

The Nova Scotia Agricultural College offers a complete four-year program of study leading to the degree Bachelor of Science in Agriculture, B.Sc. (Agr.) with a choice of one of four options: Animal Science, Agricultural Economics, Plant Protection and Plant Science. Students can take other options without interruption by transferring to the third year of the B.Sc. (Agr.) program at Macdonald College of McGill University, the University of Guelph or the University of Maine.

Agricultural Engineering

NSAC offers the first three years of a four- or five-year program in Agricultural Engineering. Students transfer without interruption to the Technical University of Nova Scotia or Macdonald College of McGill University for the final year(s) of this professional engineering degree course.

Pre-Veterinary Medicine

A one-year program of study is offered for students who wish to attempt admission to the Ontario Veterinary College of the University of Guelph in the course leading to Doctor of Veterinary Medicine.

Technician Courses

Five two-year programs of study are offered leading to technician diplomas: Agricultural Business, Agricultural Mechanization, Animal Science, Farm Equipment, and Plant Science.

Technology Courses

^{Six} Five programs are offered leading to ^{Diploma of Technology} technology diplomas; ^{five} four are two-year courses and one is a one-year course for graduate technicians.

The Biology and Chemistry Laboratory Technology courses and the Landscape Horticulture Technology course are two years in duration. They require a higher academic level of admission than the technician courses.

Farming Technology ^{and Agricultural Engineering Technology are} is a two-year program. Only students who have successfully completed one year of ^{a specified} technician course (or equivalent) are considered for admission. For eleven months (including summers) students ^{in the Farm Technology course} work on farms. Seven of those months consist of structured training under a farmer/instructor.

Agricultural Technology is a one-year program tailored to meet the needs of the student. Only technician graduates are eligible to apply for this course.

Vocational Courses

and Continuing Ed.

Short courses, varying in length from ~~three or four days~~ to 14 weeks, are offered in a wide range of agricultural topics.

Key to Identification and Scheduling of Subjects

The subjects listed in the syllabi of courses and in the descriptions of subjects beginning on page 59 are identified as to discipline and approximate academic level by letter and number codes. The disciplines are coded as follows:

Agricultural Engineering	AE	Economics and Business	EB
Animal Science	AS	Humanities	H
Biology	B	Mathematics and Physics	MP
Chemistry	C	Plant Science	PS

All subjects with numbers of 100 or over are degree credit. Most subjects with numbers between 100 and 190 inclusive are part of the first year of the curriculum and numbers 200 to 290 inclusive part of the second year. Subjects with numbers in the three hundreds and four hundreds are, respectively, third and fourth year subjects. For example, B100 is a Biology course offered in first year of the degree course curriculum. EB260 is an Economics and Business course offered in the second year of the curriculum. Both courses are credits toward a B.Sc. (Agr.) degree.

Subjects with numbers between 10 and ~~80~~⁹⁰ are offered in one or more of the Technician and/or Technology courses. In general, the number indicates the level at which the subject is offered in the program of study. For example, C12 is a Chemistry subject usually offered in the first year, first semester of the Technician courses, while PS49 is a Plant Science subject offered in the second year, second semester of some of these courses. B71 is a Biology subject offered in the second year, second semester of the Chemistry Laboratory Technology course.

Degree Courses

The Nova Scotia Agricultural College offers a complete four-year course leading to a degree in Agricultural Science, B.Sc. (Agr.), and the first three years of a four- or five-year course leading to a degree in Agricultural Engineering, B.E. (Agr.).

Students in the Agricultural Sciences, B.Sc. (Agr.), begin to specialize in their second year. They choose from a wide variety of options. The four major options available at NSAC are Plant Science, Animal Science, Agricultural Economics and Plant Protection. Other options such as Agricultural Chemistry, Soils, General Agriculture and options in the Biological Sciences, Environmental Sciences, Food Sciences and Renewable Resources are available at the University of Guelph, Macdonald College of McGill University or the University of Maine. Students who successfully complete the first two years at NSAC can transfer directly into the third year at these universities.

Graduates of the B.Sc. (Agr.) program in good standing usually have opportunities to take post-graduate studies through Assistantships for a Master of Science or Doctor's (Ph.D.) degree, if they so wish.

Engineering students who successfully complete the first three years of the Agricultural Engineering degree course proceed to the Technical University of Nova Scotia, Macdonald College of McGill University or other Engineering Faculty to complete their program of study.

NSAC offers a one-year Pre-Veterinary Course for students from the Atlantic Provinces who intend to apply for admission to the program leading to Doctor of Veterinary Medicine at the University of Guelph. Students who successfully pass this one-year program but are not admitted to the Veterinary program usually continue at NSAC in the second and subsequent years of the Agricultural Science Degree Course.

NSAC students in the Agricultural Sciences who complete the prescribed subjects and number of credits with no mark below 50% of the maximum mark obtainable and who are in good standing will be granted the degree of Bachelor of Science in Agriculture, B.Sc. (Agr.).

Students in Agricultural Engineering at NSAC who complete the prescribed subjects with no mark below 50% of the maximum obtainable and who are in good standing are granted a Degree Course diploma in Agricultural Engineering.

In Agricultural Science and Agricultural Engineering, a high honours diploma will be awarded to a student who has attained a cumulative average of 80% or better on the work of the entire course, and an honours diploma awarded to one who has attained an average of at least 75%.

Academic Standing

All students are assessed at the end of each semester. Those with failing averages (less than 50%) or failures in half or more of the subjects in which they are registered may be required to terminate their studies.

Entrance Requirements

All candidates for admission to the course leading to a B.Sc. (Agr.) degree must present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 441 or 541, New Brunswick 121 or 122, Prince Edward Island university preparatory, or equivalent) English, Mathematics, Chemistry, Biology or Physics, plus one additional subject.

All candidates for admission to the Agricultural Engineering Degree Course must present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 441 or 541, New Brunswick 121 or 122, Prince Edward Island university preparatory, or equivalent) English, Mathematics, Chemistry, Physics, and one other subject, preferably Biology.

All candidates for admission to the one-year Pre-Veterinary Course must present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 441 or 541, New Brunswick 121 or 122, Prince Edward Island university preparatory, or equivalent) English, Mathematics, Chemistry, Physics and one other subject, preferably Biology.

All candidates must present a satisfactory medical certificate dated not more than thirty days before registration.

Graduates of Newfoundland Grade XI are required to complete, with an average of at least 60%, an academic year beyond that year in the subjects indicated above.

Supplemental Examinations

A student who has made an average of at least 50% and has passed at least half of the subjects taken may write one supplemental examination in each failed subject in which the mark is 35% or higher. The supplemental examination (or examinations) must be written in either late June or early September immediately following. A student in final year may write one supplemental examination in January if passing that examination and all final semester examinations, makes the student eligible for graduation.

Students apply to write a supplemental examination or examinations by notifying the Registrar's Office of the subject or subjects they intend to write, and by submitting the supplemental examination fee of \$10 per exam no later than June 4th for the June supplemental examination period and August 17 for the September supplemental examination period.

No supplemental examination is to be written until the required fee has been paid. If a student does not show to write a supplemental examination, the fee is forfeited. Should a candidate for a supplemental examination not give notice and pay the required fee on time, but arrive to write an examination, permission to write may be granted at the discretion of the Registrar and the instructor, and upon payment of \$20 per examination.

Bachelor of Science in Agriculture – B.Sc. (Agr.)

The B.Sc. (Agr.) Degree Course is a four-year program designed to provide a sound education in the science of agriculture. Graduates of this course meet the educational requirements for Professional Agrologists in the provincial Institutes of Agrologists of the Atlantic Provinces.

The first academic year (two semesters) of this program is the same for all students. Normally students select one of four options before the commencement of third semester and continue in that major field of study until they graduate. Options offered at NSAC are:

- Agricultural Economics
- Animal Science
- Plant Protection
- Plant Science

Other options are available to students if they transfer at the end of their second year to Macdonald College of McGill University or to the University of Guelph.

NSAC has offered a program leading to a B.Sc. (Agr.) degree for 76 years. In 1980, it received approval to offer all four years of that course; previously only the first two years had been offered. The third-year program will be offered first in 1983-84 and the fourth year in 1984-85. Students who were admitted to the first year in the fall of 1981, and those admitted in the fall of 1982 and subsequent years will be able to complete their B.Sc. (Agr.) program at NSAC.

Minimum Requirements

Academic requirements for the degree Bachelor of Science in Agriculture consist of successful completion of:

- all subjects as specified in the syllabus of subjects
- not less than 12 semester subjects in Agricultural Science
- not less than 6 semester subjects in Basic Sciences
- not less than 5 semester subjects in Humanities and Economics
- at least 40 semester subjects
- at least 15 subjects at NSAC plus registration in the final year at NSAC.

Syllabus

Year 1 – ALL OPTIONS

Semester I

- B100 The Plant Kingdom
- C100 Chemical Principles
- H200 Technical Writing and English & American Authors
- MP100 Calculus and Analytic Geometry I
- PS100 Principles of Crop Production

Semester II

- AS100 Introductory Animal Science
- B110 The Animal Kingdom
- C110 Organic Chemistry
- EB110 Economics of Agriculture
- MP105 Calculus and Analytic Geometry II

Years 2, 3, and 4 – AGRICULTURAL ECONOMICS

Semester III

- C220 Soil Science
- EB200 Microeconomics I
- EB210 Financial Accounting I
- MP200 Statistics & Agricultural Experimentation
- Elective¹

Semester IV

- EB205 Microeconomics II
- EB215 Financial Accounting II
- 350 → EB255 Macroeconomics I
- EB260 Mathematical Economics
- H205 Canadian Literature

Semester V

- EB310 Cost Accounting
- EB330 Agricultural Price & Market Analysis
- EB340 Farm Management I
- EB355 Macro Economics II
- Elective¹

Semester VI

- EB320 Business Law
- EB325 Operations Research
- EB335 Business Marketing
- MP220 Computer Science
- Elective¹

Semester VII

- EB400 Resource & Environmental Economics
- EB410 Econometrics
- Elective¹
- Elective¹
- Elective¹

Semester VIII

- EB420 Agricultural Policy
- EB425 Research Methods
- EB440 Farm Management II
- Elective¹
- Elective¹

¹Electives must include one subject in each of Agricultural Engineering, Animal Science, and Plant Science.

Years 2, 3 and 4 – ANIMAL SCIENCE

Semester III

B200 Cell Biology
B240 Introduction to Genetics
C200 Bio-Organic Chemistry
C220 Introduction to Soil Science
MP110 Modern Physics

Semester V

AS300 Physiology of Farm Animals
AS305 Animal Nutrition
AS310 Animal Breeding
Elective¹
Elective¹

Semester VII

Elective¹
Elective¹
Elective¹
Elective¹
Elective¹

Semester IV

B225 Microbiology
B245 Agricultural Genetics
C205 Biochemistry
H205 Canadian Literature
MP200 Statistics and Agricultural
Experimentation

Semester VI

AS315 Reproductive Physiology
AS320 Animal Health
AS325 Feeds & Feeding
EB255 Macroeconomics I
Elective¹

Semester VIII

AS450 Seminar & Project
Elective¹
Elective¹
Elective¹
Elective¹

¹Electives must include three Animal Production, two Humanities or Economics, and two Agricultural (not Animal Science) subjects.

Years 2, 3 and 4 – PLANT PROTECTION

Semester III

B200 Cell Biology
B240 Introduction to Genetics
C200 Bio-Organic Chemistry
C220 Introduction to Soil Science
MP110 Modern Physics

Semester V

B300 Principles of Plant Pathology
B310 Mycology
B320 General Entomology
B330 Ecology
B335 Weed Science

Semester VII

B400 Soil Biology
B449 Seminar and Project
PS400 Plant Breeding
Elective¹
Elective¹

Semester IV

B225 Microbiology
B260 Plant Physiology
C205 Biochemistry
H205 Canadian Literature
MP200 Statistics and Agricultural
Experimentation

Semester VI

B305 Economic Plant Pathology
B325 Economic Entomology
MP220 Computer Science
Elective¹
Elective¹

Semester VIII

B450 Seminar and Project
EB255 Macroeconomics I
H210 Communications &
Extension Methods
Elective¹
Elective¹

¹Electives must include one Economics or Humanities subject and one Agricultural Engineering subject.

Years 2, 3 and 4 – PLANT SCIENCE

Semester III

- B200 Cell Biology
- B240 Introduction to Genetics
- C220 Introduction to Soil Science
- MP110 Modern Physics
- Agronomic or Horticultural Production Course¹

Semester V

- B300 Principles of Plant Pathology
- B320 General Entomology
- B335 Weed Science
- C200 Bio-Organic Chemistry
- Elective¹

Semester VII

- C420 Soil Classification and Survey
or PS400 Plant Breeding
- PS415 Crop Adaptation
- Elective¹
- Elective¹
- Elective¹

Semester IV

- B260 Plant Physiology
- EB255 Macroeconomics I
- H205 Canadian Literature
- Agronomic or Horticultural Production Course
- Elective¹

Semester VI

- C320 Soil Fertility and Fertilizers
- MP200 Statistics and Agricultural Experimentation
- Elective¹
- Elective¹
- Elective¹

Semester VIII

- PS405 Agronomy *or* PS410 Horticulture
- PS450 Seminar and Project
- Elective¹
- Elective¹
- Elective¹

¹Electives must include one Agricultural Engineering subject.

Bachelor of Engineering in Agriculture – B.E.(Agr.)

The Bachelor of Engineering in Agriculture, B.E.(Agr.), is a four- or five-year program designed to combine all the engineering requirements for the status of a professional engineer with a knowledge of agriculture.

The first three years of this program are offered at NSAC. Students who successfully complete the course graduate with a Diploma in Agricultural Engineering. Graduates usually complete the program at the Technical University of Nova Scotia or Macdonald College of McGill University.

Successful completion of the subjects listed in this syllabus is required for the NSAC Diploma.

Syllabus

Year 1

Semester I

AE100 Graphics and Projection
C100 Chemical Principles
H200 Technical Writing and
English & American Authors
MP100 Calculus & Analytic
Geometry I
MP130 Physics for Life Sciences I

Spring Session

AE260 Surveying – 2 weeks

Year 2

Semester III

AE220 Dynamics of Particles
B100 Plant Kingdom
C220 Introduction to Soil Science
MP220 Computer Science
MP230 Multivariable Calculus
PS100 Principles of
Crop Production

Year 3

Semester V

AE310 Thermodynamics
AE330 Agricultural Mechanization
AE335 Materials Handling and
Processing
AE340 Soil & Water
MP300 Electric Circuits
Humanity Elective

Semester II

AE110 Statics
C110 Organic Chemistry
EB110 Economics of Agriculture
MP105 Calculus & Analytic
Geometry II
MP135 Physics for Life Sciences II

Semester IV

AE205 Graphics & Design
AE225 Dynamics of Rigid Bodies
AS100 Introductory Animal Science
B110 Animal Kingdom
H150 Agriculture Today
MP235 Differential Equations
& Linear Algebra

Semester VI

AE315 Strength of Materials
AE320 Agricultural Structures
AE350 Fluid Mechanics
EB255 Macroeconomics I or EB110
Economics of Agriculture¹
MP200 Statistics & Agricultural
Experimentation

¹For students who did not take this subject previously.

Pre-Veterinary Medicine

Students who wish to attempt a program of study that can lead to a Degree in Veterinary Medicine (D.V.M.) take the degree course subjects listed below. Only applicants who have successfully completed two years in Chemistry and Physics, in addition to Mathematics and English, and one additional subject (preferably Biology) at the university preparatory Grade XII level can complete this program of study in one year.

Syllabus

Semester I

B100 The Plant Kingdom
C100 Chemical Principles
H200 Technical Writing and English and American Authors
MP100 Calculus and Analytic Geometry I
MP130 Physics for Life Sciences I

Semester II

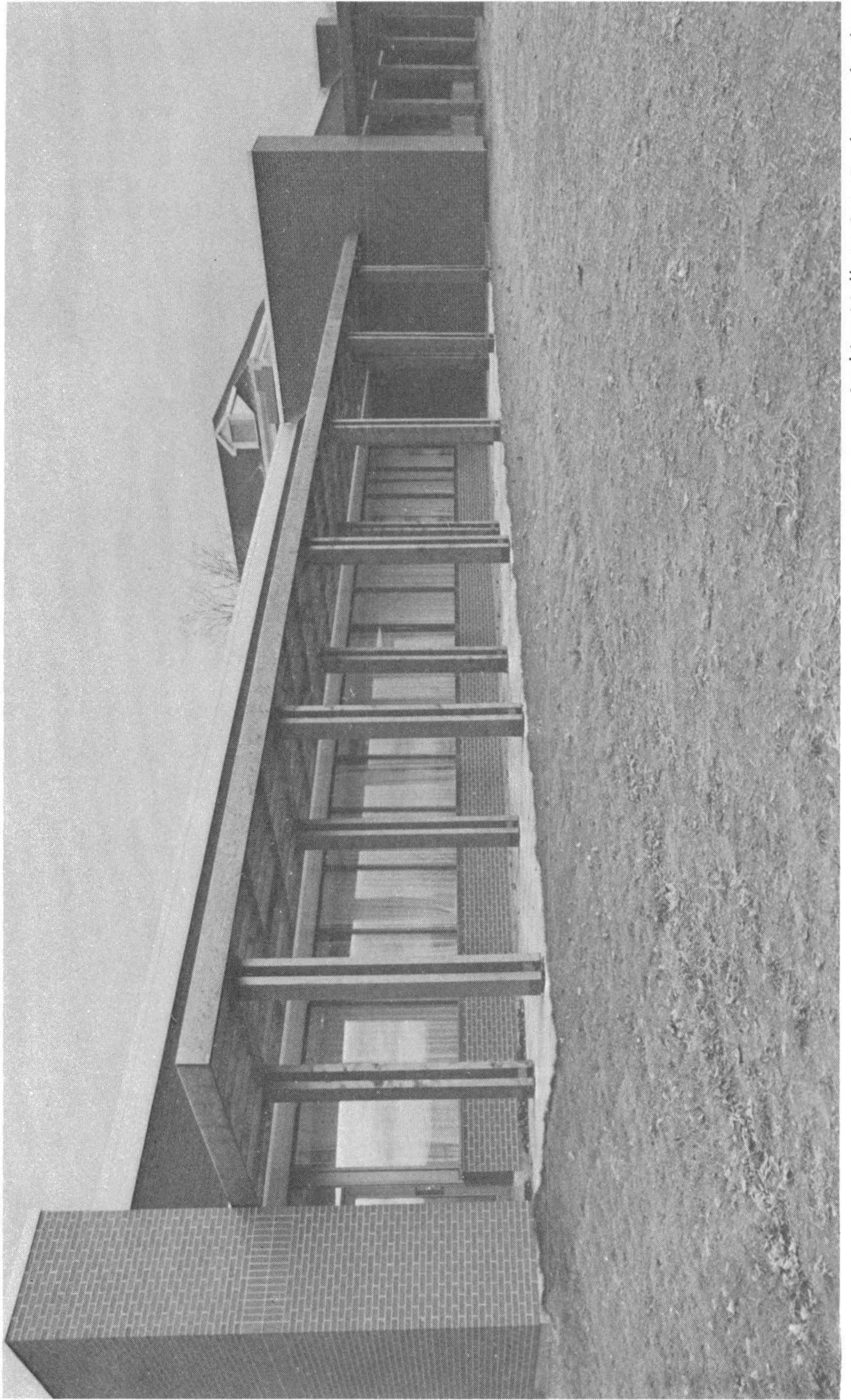
AS100 Introductory Animal Science
B110 The Animal Kingdom
C110 Organic Chemistry
EB110 Economics of Agriculture
MP105 Calculus and Analytic Geometry II
MP135 Physics for Life Sciences II

Selection of students for admission to the Pre-Veterinary year of study at the University of Guelph occurs at NSAC during or after successful completion of the above program. An average of 75% or higher is required to assure consideration by the selection committee.

Students selected at NSAC to continue in the program leading to a D.V.M. are admitted to another Pre-Veterinary year of subjects at the University of Guelph before admission to the four-year course in Veterinary Medicine.

Students who successfully complete the Pre-Veterinary course at NSAC but are not selected to continue in the program of study leading to a D.V.M. are admitted to the second year of the Agricultural Science Degree course at NSAC. These students may choose Animal Science or any one of the options offered in the B.Sc.(Agr.) program.

Most options in the B.Sc.(Agr.) programs lead to opportunities for graduate studies at the M.Sc. and Ph.D. levels.



Jenkins Hall, N.S.A.C. dining facility.

Technician Courses

To satisfy the needs of the farm and farm-related businesses and services, the Nova Scotia Agricultural College offers a broad program of studies leading to Technician Diplomas.

Entrance Requirements

All candidates for admission

- should be 18 years of age, on or before the opening day of the College year (mature younger candidates will be considered);
- ~~must present a satisfactory medical certificate dated no more than 30 days before registration;~~
- must produce evidence of senior high school graduation with three university preparatory courses in English, two in Mathematics, one in Chemistry, and one in Biology, or satisfactory completion of the pre-tech semester;
- must present themselves for a selection interview when required.

Candidates of mature age and from a different academic background may apply and have their study records evaluated for admission.

Candidates with at least 60% in a senior high school course in Physics will be exempt from Physics MP15.

Possession of the minimum entrance requirements does not guarantee admission.

accepted students are asked to submit a med info form.

Pre-Tech Semester

The Nova Scotia Agricultural College offers a program of studies designed to prepare high school graduates for entrance into our Technician Courses. The period of studies will be from early January until late April (see Sessional Dates).

Candidates may be considered who lack entrance requirements in up to three of the following subjects:

MP01	Mathematical Concepts
C01	Chemistry
H01	Language
EB01	The Agricultural Industry
B01	Biology

All students accepted for this pre-tech semester must take at least four of these subjects.

Upon satisfactory completion of the semester, a student may be granted acceptance into one of the courses leading to a Technician Diploma.

Academic Standing

All students are assessed at the end of each semester. Those with failing averages (less than 50%) or failures in half or more of the subjects in which they are registered may be required to terminate their studies.

Students who complete all the course requirements with no mark below 50% of the maximum mark obtainable and are in good standing will be awarded a Technician Diploma and thus become "Associates of the Nova Scotia Agricultural College with all the rights and privileges pertaining thereto."

A high honours diploma will be awarded to a student who has attained an average of at least 80% and an honours diploma awarded to one who has attained an average of at least 75%.

Supplemental Examinations

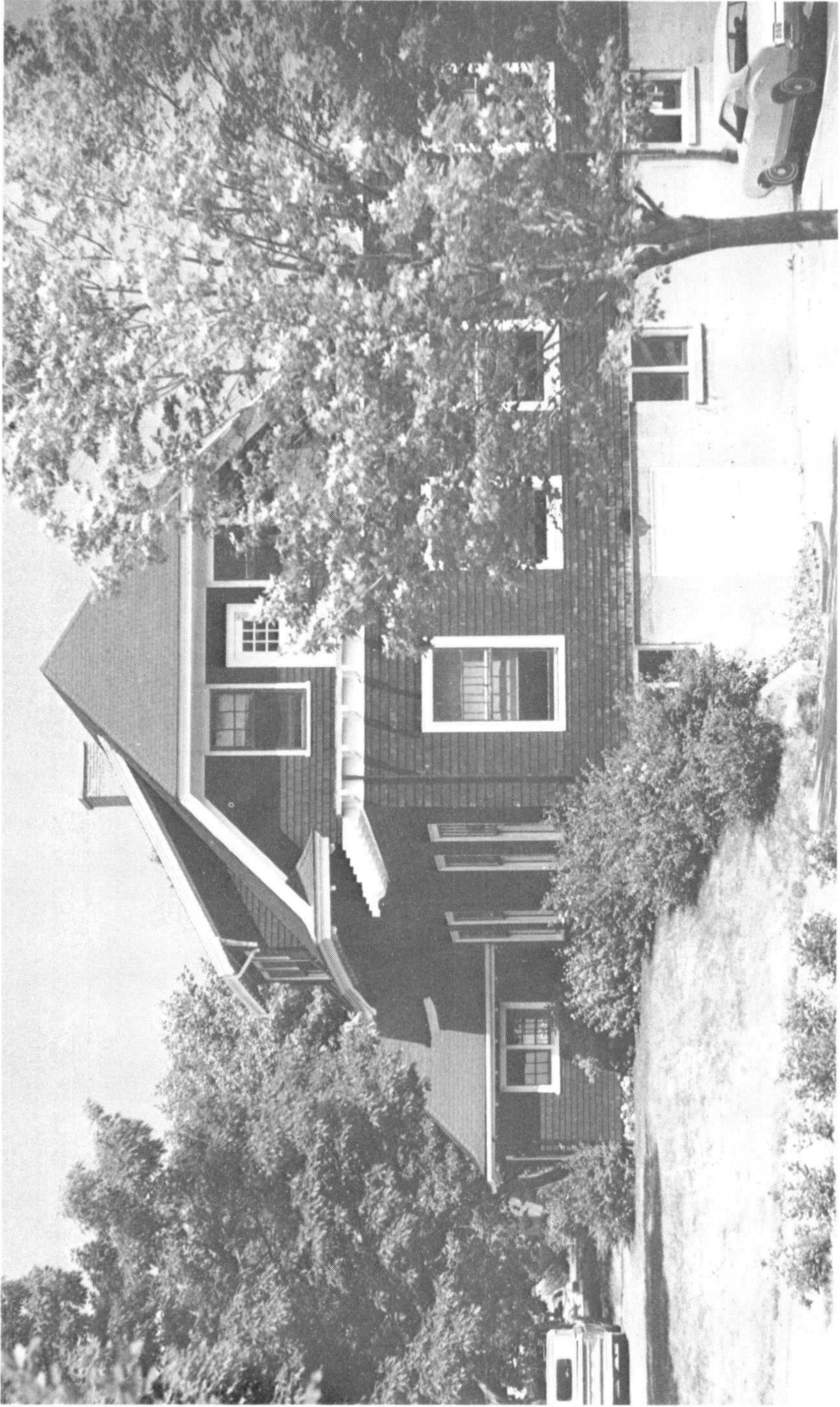
A student in a Technician Course may write a supplementary examination in up to half of the subjects for which he/she is enrolled, if the combined average for all subjects is above 50% and the mark in each failed subject is at least 35%.

Provided that the disqualifying conditions stated above do not apply, a student may write one supplemental examination in a subject, in either June or September immediately following the failure. A student who fails to pass more than two subjects after writing supplemental examinations may not register for the regular second academic year.

A student in final year may write one supplemental examination in January if passing that examination and all final semester examinations make the student eligible for graduation.

Application for permission to write a supplemental examination in June must be submitted before June 5; for permission to write in September, the application must be submitted before August 18.

The fee for a supplemental examination in any subject is \$10. If a student does not show for a supplemental examination, the fee is forfeited. A candidate for a supplemental examination who does not give notice and pay the required fee on time but arrives for an examination, may, at the discretion of the Registrar and the instructor, be permitted to write upon payment of a fee of \$20 per examination.



Collins Building, Landscape Horticulture, NSAC.

Agricultural Business

The Nova Scotia Agricultural College offers a two-year course in Agricultural Business to help students prepare themselves for careers on the farm as business managers or as managers and supervisors in farm-related business firms.

Academic Entrance Requirements

High School graduation with three university preparatory courses in English, two in Mathematics, one in Biology and one in Chemistry, or satisfactory completion of the pre-tech semester.

Syllabus for Agricultural Business with minor in

Animal Science	Plant Science	Agricultural Mechanization
YEAR 1		
Semester I		
C12 Introductory Soils	C12 Introductory Soils	C12 Introductory Soils
C14 Agr. Chemistry	C14 Agr. Chemistry	C14 Agr. Chemistry
EB10 Accounting	EB10 Accounting	EB10 Accounting
EB12 Macroeconomics	EB12 Macroeconomics	EB12 Macroeconomics
EB40 Marketing Practices	EB40 Marketing Practices	EB40 Marketing Practices
PS40 Field Crops I	PS40 Field Crops I	MP15 Physics ³
An additional subject, AS29 Farm Practices, is optional for all students.		
Semester B		
C13 Management for Crop Production	AS30 Animal Science	AE15 Oil Hydraulics ³
EB11 App. Acct. & Taxation	C13 Management for Crop Production	AS30 Animal Science
EB13 Microeconomics	EB11 App. Acct. & Taxation	C13 Management for Crop Production
H10 Technical Writing	EB13 Microeconomics	EB11 App. Acct. & Taxation
MP14 Computational Methods	MP14 Computational Methods	EB13 Microeconomics
PS41 Field Crops II	PS41 Field Crops II	MP14 Computational Methods
YEAR 2		
Semester C		
AS34 Animal Nutrition	B43 Entomology	AE30 Farm Machinery ^{3,4}
B18 Animal Genetics	EB43 Business Project	EB43 Business Project
B20 Animal Physiology	EB240 Farm Management	EB240 Farm Management
EB43 Business Project	H10 Technical Writing	H10 Technical Writing
EB240 Farm Management	PS53 Vegetable Production ²	PS40 Field Crops I
Humanities Subject	Humanities Subject	Humanities Subject

Semester D

AS35	Feeds & Feeding	B40	Plant Pathology	AE34	Farm Tractors ³
AS50	Dairy Production ¹	EB41	Business Law	AE38	Hort. Engineering ⁵
AS51	Beef & Sheep Prod. ¹	EB42	App. Farm Management	EB41	Business Law
EB41	Business Law			EB42	App. Farm Management
EB42	App. Farm Management	EB220	Production Economics	EB220	Production Economics
EB220	Production Economics	PS49	Potato Production ²		
		PS40-76	Plant Production ² Physiology	PS41	Field Crops II

¹May substitute AS52 Swine Production if timetable permits.

²May substitute ~~PS44~~ Tree Fruit Crops if timetable permits.

³May substitute AE12 Drafting, MP15 Physics, AE32 Farm Buildings and AE36 Controls & Processing if timetable permits.

⁴May substitute AE14 Surveying if timetable permits.

⁵May substitute AE45 Soil & Water Management if timetable permits.

PS43 Small Fruit Crops and Berry Crops

A student who has successfully completed the first year with a good study record may apply for consideration to follow a two-year program in Farming Technology.

A student who has successfully completed the two years of Agricultural Business with a good study record may apply for consideration to follow a one-year program in Agricultural Technology.

Agricultural Mechanization

The Nova Scotia Agricultural College offers a two-year course to help students prepare themselves for careers as agricultural mechanization technicians on farms or in farm-related firms and services.

Academic Entrance Requirements

High school graduation with three university preparatory courses in English, two in Mathematics, one in Biology and one in Chemistry, or satisfactory completion of the pre-tech semester.

Syllabus for Agricultural Mechanization with minor in

Animal Science

Plant Science

Agricultural Business

YEAR 1

Semester A

AE12	Drafting	AE12	Drafting	AE12	Drafting
AE13	Shopwork	AE13	Shopwork	AE13	Shopwork
C12	Introductory Soils	C12	Introductory Soils	C12	Introductory Soils
C14	Agr. Chemistry	C14	Agr. Chemistry	C14	Agr. Chemistry
EB10	Accounting	EB10	Accounting	EB10	Accounting
MP15	Physics	MP15	Physics	MP15	Physics

An additional subject, AS29 Farm Practices, is optional for all students

Semester B

AE15	Oil Hydraulics	AE15	Oil Hydraulics	AE15	Oil Hydraulics
AE19	Technical Drawing	AE19	Technical Drawing	AE19	Technical Drawing
AE20	Shopwork Practices	AE20	Shopwork Practices	AE20	Shopwork Practices
EB11	App. Acct. & Taxation	EB11	App. Acct. & Taxation	EB11	App. Acct. & Taxation
H10	Technical Writing	H10	Technical Writing	H10	Technical Writing
MP14	Computational Methods	MP14	Computational Methods	MP14	Computational Methods

YEAR II

Semester C

AE14	Surveying	AE14	Surveying	AE14	Surveying
AE30	Farm Machinery	AE30	Farm Machinery	AE30	Farm Machinery
AE32	Farm Buildings	AE32	Farm Buildings	AE32	Farm Buildings
AS34	Animal Nutrition	PS40	Field Crops I	EB12	Macroeconomics
B18	Animal Genetics	PS53	Vegetable Production	EB40	Marketing Practices
B20	Animal Physiology		Humanities Subject	EB240	Farm Management

Semester D

AE34	Farm Tractors	AE34	Farm Tractors ¹	AE34	Farm Tractors ¹
AE36	Controls & Processing ¹	AE36	Controls & Processing ¹	AE36	Controls & Processing ¹
AE45	Soil & Water Mgt. ¹	AE45	Soil & Water Mgt. ¹	AE45	Soil & Water Mgt. ¹
AE47	Project/Seminar	AE47	Project/Seminar	AE47	Project/Seminar
AS50	Dairy Production ²	PS41	Field Crops II	EB13	Microeconomics
	Humanities Subject	PS49	Potato Production		Humanities Subject

¹AE38 Horticultural Engineering may be substituted if timetable permits.

²Another Livestock Production Course may be substituted if timetable permits.

A student who has successfully completed the first year with a good study record may apply for consideration to follow a two-year program in Farming Technology or Agricultural Engineering Technology.

A student who has successfully completed the two years of Agricultural Mechanization with a good study record may apply for consideration to follow a one-year program in Agricultural Technology.

Animal Science

The Nova Scotia Agricultural College offers a two-year course in Animal Science to help students prepare themselves for careers on farms as animal specialists or as animal science technicians in farm-related services and industries.

Academic Entrance Requirements

High school graduation with three university preparatory courses in English, two in Mathematics, one in Biology and one in Chemistry, or satisfactory completion of the pre-tech semester.

Syllabus for Animal Science with minor in

Agricultural Business

Agricultural Mechanization

YEAR I

Semester A

AS34 Animal Nutrition
 B18 Animal Genetics
 B20 Animal Physiology
 C12 Introductory Soils
 C14 Agr. Chemistry
 EB10 Accounting

AE12 Drafting³
 AS34 Animal Nutrition
 B18 Animal Genetics
 B20 Animal Physiology
 C12 Introductory Soils
 C14 Agr. Chemistry

An additional subject, AS29 Farm Practices, is required of all students.

Semester B

AS33 Applied Animal Physiology
 AS35 Feeds & Feeding
 AS44 Animal Breeding
 C13 Soil Management for
 Crop Production
 EB11 App. Acct. & Taxation
 MP14 Computational Methods

AS33 Applied Animal Physiology
 AS35 Feeds & Feeding
 AS44 Animal Breeding
 C13 Soil Management for
 Crop Production
 MP14 Computational Methods
 MP15 Physics³

YEAR II

Semester C

~~AS51 Beef and Sheep Production~~
 AS53 Poultry Production¹
 EB240 Farm Management
 H10 Technical Writing
 PS40 Field Crops I
 Humanities Subject

AE32 Farm Buildings^{3,4}
 AS47 Animal Health
 AS53 Poultry Production¹
 H10 Technical Writing
 PS40 Field Crops I
 Humanities Subject

Semester D

AS45 Project/Seminar
 AS50 Dairy Production²
 AS51 Beef & Sheep Production²
 AS52 Swine Production²
 EB41 Business Law
 PS41 Field Crops II

AE36 Controls & Processing^{3,4}
 AS45 Project/Seminar
~~AS47 Animal Health~~ AS51 Beef & Sheep Production²
 AS50 Dairy Production²
 AS52 Swine Production²
 PS41 Field Crops II

1. May substitute AS55 Fur Production or AS54 Horse Production if timetable permits.
2. May substitute AS37 Lab Animal Care for one of these if timetable permits.
3. May substitute AE15 Oil Hydraulics, AE34 Farm Tractors, and AE30 Farm Machinery for these three subjects if timetable permits.
4. May substitute AE14 Surveying and AE45 Soil & Water Management if timetable permits.

A student who has successfully completed the first year with a good study record may apply for consideration to follow a two-year program in Farming Technology.

A student who has successfully completed the two years of Animal Science with a good study record may apply for consideration to follow a one-year program in Agricultural Technology.

Farm Equipment

The Nova Scotia Agricultural College offers a two-year course to help students prepare themselves for careers in farm equipment dealerships involving the adjustment, maintenance and repair of farm equipment.

Academic Entrance Requirements

High school graduation with three university preparatory courses in English, two in Mathematics, one in Biology and one in Chemistry, or a satisfactory completion of the pre-tech semester.

Syllabus

YEAR I

Semester A

- AE12 Drafting
- AE13 Shopwork
- C12 Introductory Soils
- C14 Agr. Chemistry
- EB10 Accounting
- MP15 Physics

Semester B

- AE15 Oil Hydraulics
- AE20 Shopwork Practice
- AE27 Welding
- EB11 App. Acct. & Taxation
- H10 Technical Writing
- MP14 Computational Methods

Spring Program

- AE23 Farm Equipment Dealership - 6 weeks

YEAR II

Semester C

- ~~AE 30 Farm Machinery~~
- AE48 Shop Management
- AE49 Electrical Systems
- AE63 Tractor Power
- ~~AE64 Tractor Overhaul~~ Humanities
- ~~AE66 Field Equipment Overhaul~~
- PS30 Plant Science

Semester D

- AE47 Project/Seminar
- AE65 Tractor Overhaul ~~#~~
- AE67 Field Equipment Overhaul ~~#~~
- AE68 Farmstead Equipment Overhaul
- AS30 Animal Science
- ~~Humanities Subject~~

EB 41 Bez low.

Plant Science

The Nova Scotia Agricultural College offers a two-year course in Plant Science to help students prepare themselves for careers on farms as plant specialists or as plant science technicians in farm-related services and industries.

Academic Entrance Requirements

High school graduation with three university preparatory courses in English, two in Mathematics, one in Biology and one in Chemistry, or satisfactory completion of the pre-tech semester.

Syllabus for Plant Science with minor in

Agricultural Business

Horticulture

Animal Science

YEAR I

Semester A

C12	Introductory Soils	B13	Plant Identification	B13	Plant Identification
C14	Agr. Chemistry	C12	Introductory Soils	C12	Introductory Soils
EB10	Accounting	C14	Agr. Chemistry	C14	Agr. Chemistry
H10	Technical Writing	H10	Technical Writing	H10	Technical Writing
MP15	Physics	MP15	Physics	MP15	Physics
PS40	Field Crops I	PS43	Field Crops I <i>Berry Crops</i> <i>Small Fruit Crops</i>	PS40	Field Crops I

An additional subject, AS29 Farm Practices, is optional for all students.

Semester B

B40	Plant Pathology	B40	Plant Pathology	AE15	Oil Hydraulics
B41	Plant Physiology	B41	Plant Physiology	B40	Plant Pathology
C13	Soil Management for Crop Production	C13	Soil Management for Crop Production	B41	Plant Physiology
MP14	Computational Methods	MP14	Computational Methods	C13	Soil Management for Crop Production
PS10	Plant Science Skills	PS10	Plant Science Skills	PS10	Plant Science Skills
PS41	Field Crops II	PS44	Tree Fruit Crops	PS41	Field Crops II

C13

YEAR II

Semester C

B13	Plant Identification	AE14	Surveying	AE30	Farm Machinery
B43	Entomology	B43	Entomology	AS34	Animal Nutrition
EB12	Macroeconomics	PS39	Greenhouse Management ³	B18	Animal Genetics
EB240	Farm Management	PS45	Turf Production I ³	B20	Animal Physiology
PS52	Plant Science Project	PS50	Landscape <i>Plant Horticulture</i> ³	B43	Entomology
PS53	Vegetable Crops ¹	PS52	Plant Science Project	PS52	Plant Science Project

Semester D

B46 Weed Science	AE38 Hort. Engineering	AE34 Farm Tractors
EB11 App. Acct. & Taxation	B46 Weed Science	AS51 Beef and Sheep Production ⁵
EB13 Microeconomics	EB41 Business Law ⁴	B46 Weed Science
EB41 Business Law	PS46 Turf Production II ⁴	PS49 Potato Production ⁶
PS49 Potato Production ² Humanities Subject	PS61 Residential Land Design <i>Landscape plant material II</i> ⁴ Humanities Subject	PS76 Plant Production Physiology ⁶ Humanities Subject

- Small Fruit Crops*
- ¹May substitute PS43 ~~Berry Crops~~ if timetable permits.
 - ²May substitute PS44 Tree Fruit Crops if timetable permits.
 - ³May substitute other Plant Science Production Subject if timetable permits.
 - ⁴May substitute PS49 Potato Production, PS76 Plant Products Physiology, and AS30 Animal Science if timetable permits.
 - ⁵May substitute other Animal Science Production Subject if timetable permits.
 - ⁶May substitute PS42 Cash Crops & Seed Production for one of these subjects if timetable permits.

A student who has successfully completed the first year with a good study record may apply for consideration to follow a two-year program in Farming Technology.

A student who has successfully completed the two years of Plant Science with a good study record may apply for consideration to follow a one-year program in Agricultural Technology.



Recording crop production data. Cox Institute, NSAC.

Technology Courses for High School Graduates

The Nova Scotia Agricultural College offers specialized courses to help persons prepare themselves for careers associated with laboratory techniques in Biology and Chemistry, and with the practice of Landscape Horticulture. These studies respectively lead to a Diploma of Technology (Dipl. T.) in Chemistry, a Diploma of Technology (Dipl. T.) in Biology, and a Diploma of Technology (Dipl. T.) in Landscape Horticulture.

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Entrance Requirements for Biology, Chemistry Laboratory Technology and Landscape Horticulture Technology

A candidate for a Diploma of Technology may qualify for admission to the two-year courses in one of two ways:

- completion of Grade XII (N.S. 441 or 541, N.B. 122, P.E.I. Academic XII) or its equivalent with marks of not less than 60% in English, Mathematics, Chemistry and Biology;
- completion of degree or technical subjects in other post high school courses.

Each candidate must ~~also present a satisfactory medical certificate and~~ be available for ^{an}interview when requested.

Accepted candidates will follow the syllabus for the course in which they have registered. Descriptions of each individual subject are found in the section of the Calendar beginning on Page 59.

all accepted students will be asked to complete a medical info. form.

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Biology Laboratory Technology

The Nova Scotia Agricultural College offers a course to help students prepare for work as biology laboratory technologists with agricultural and biological research agencies, university biology departments, food processing and distribution companies, environmental control services, quality control and testing services, or with product development programs.

Academic Entrance Requirements

High school graduation with completed Grade XII (N.S. 441 or 541, N.B. 122, P.E.I. Academic XII) or its equivalent with marks not less than 60% in English, Mathematics, Chemistry and Biology.

Syllabus

YEAR I

Semester A

B44 Microbiology I
B70 Microtechniques I
C12 Introductory Soils
C40 Chemistry Laboratory Techniques
C42 Organic Chemistry
PS100 Plant Science

Semester B

AS100 Animal Science
B42 Botanical Laboratory Techniques
B45 Microbiology II
B71 Microtechniques II
C13 Soil Management for
Crop Production
C43 Bio-Organic Chemistry

YEAR II

Semester C

AS34 Animal Nutrition
AS47 Animal Health
B13 Plant Identification
B20 Animal Physiology
B330-B270 Ecology
C45 Qualitative Analysis

Semester D

AS37 Laboratory Animal Care
B41 Plant Physiology
B76 Plant Protection
C44 Instrumentation I
C46 Quantitative Analysis
MP70 Basic Statistics

Chemistry Laboratory Technology

The Nova Scotia Agricultural College offers a course to help students prepare for work as Chemistry Laboratory Technologists with agricultural and chemical research agencies, university chemistry departments, food processing and distribution companies, environmental control services, quality control and analysis services, or with product development programs.

Academic Entrance Requirements

High school graduation with completed Grade XII (N.S. 441 or 541, N.B. 122, P.E.I. Academic XII) or its equivalent with marks not less than 60% in English, Mathematics, Chemistry and Biology.

Syllabus

YEAR I

Semester A

- C40 Chemistry Laboratory Techniques I
- C42 Organic Chemistry
- C45 Qualitative Analysis
- C100 Chemistry (Lectures only)
- MP40 Electricity and Electrical Measurements
- MP100 Calculus and Analytical Geometry I

Semester B

- C41 Chemistry Laboratory Techniques II
- C43 Bio-Organic Chemistry
- C44 Instrumentation I
- C46 Quantitative Analysis
- MP70 Basic Statistics
- ~~Approved elective from outside the Chemistry Department~~
AS100 Introductory Animal Science

YEAR II

Semester C

- C70 Instrumentation II
- C75 Food Chemistry I
- C79 Project Organization
- C300 Physical Chemistry
- MP41 Light and Optics
- ~~Approved elective from outside the Chemistry Department~~

Semester D

- C71 Instrumentation III
- C73 Laboratory Organization and Management
- C76 Food Chemistry II
- C80 Project Implementation
- C310 Radiotracers in Agriculture
- ~~MP71 Computer Programming~~
Science

C220 Soil Sci
or
PS100 Plant Science
Principles of Crop Production

MP220

Landscape Horticulture Technology

The Nova Scotia Agricultural College offers a two-year course to help students prepare themselves for careers with landscaping firms, planning agencies, recreational parks, institutions or in self-employed roles as landscape horticultural technologists.

on space.

Academic Entrance Requirements

High school graduation with a completed Grade XII (N.S. 441 or 541, N.B. 122, P.E.I. Academic XII) or its equivalent with marks not less than 60% in English, Mathematics, Chemistry and Biology.

Another suitable Agricultural Subject may be substituted if ~~to~~ feasible parents.

Syllabus

YEAR I

Semester A

AE12 Drafting
B13 Plant Identification
C12 Introductory Soils
PS45 Turf Production I
PS50 Landscape Horticulture I
PS55 Nursery Crops
PS60 Landscape Plant
Material I

Semester B

AE38 Horticultural Engineering
B40 Plant Pathology
B41 Plant Physiology
C13 Soil Management for Crop Production
PS46 Turf Production II
PS51 Residential Landscape
Design
PS61 Landscape Plant
Material II

Spring Session

PS70 Landscaping Techniques - 6 weeks

YEAR II

Semester C

AE14 Surveying
B43 Entomology
EB10 Accounting
PS39 Greenhouse Management
PS71 Arboriculture
PS73 Landscape Horticulture II

H140 *Person Mgmt.*

Semester D

~~AE45~~ Soil and Water Management
EB11 Applied Accounting
and Taxation
EB41 Business Law
H140 Personnel Management *H325*
~~H210~~ *Communications and Technology in Ag. Comm.*
Extension Methods
PS72 Landscape Maintenance
PS74 Landscape Design and
Construction
PS75 Landscape Horticulture
Project

Technology Courses for Technician Students

Agricultural Technology

The College also offers courses designed to help technicians become more proficient in their chosen fields of agricultural endeavour. These studies lead to a Diploma of Technology (Dipl. T.) in Agricultural Technology.

A candidate who has received a Technician Diploma in Agricultural Business, Agricultural Mechanization, Animal Science, or Plant Science, or who has equivalent standing may apply for a year of directed study leading to a Diploma of Technology. If the student's study record is good and there is evidence that he/she is capable of doing independent study, the application will be favourably considered.

For admission, such a candidate must:

- present a satisfactory medical certificate;
- submit a program of study to the Technician-Technology Syllabus Committee; and
- be available for interviews when requested.

“Program of Study” forms are available from the office of the Dean of Vocational and Technical Education. Application forms accompanied by a completed “Program of Study” should be submitted to the Registrar before May 1 of the year in which study is to commence.

Each program of study must be equivalent to an academic year and may include a combination of subjects, projects and experience.

As a general rule, candidates select subjects from existing College courses for which they have the necessary prerequisites.

A more structured program of studies containing courses, projects, and potato industry labs has been developed to help students from countries buying Canadian seed potatoes to better understand the technology of potato production. This sequence, developed in consultation with Potatoes Canada, begins in January and concludes in September of each year. A Diploma of Technology in Agricultural Technology is awarded upon successful completion of the program.

Agricultural Engineering Technology

The Nova Scotia Agricultural College offers a two-year course for students who wish to achieve high levels of proficiency in Agricultural Engineering Technology.

Students who have completed or are completing the first year of the Agricultural Mechanization or Farm Equipment Technician course, and have a good study record, may apply for admission to the Agricultural Engineering Technology Course.

Syllabus

YEAR I

Semester A

- AE48 Shop Management
- AE49 Electrical Systems
- AE63 Tractor Power
- H140 Personnel Management
- MP100 Calculus and Analytical Geometry I
- PS100 Plant Science

Semester B

- AE27 Welding¹
- AE36 Controls & Processing
- AS100 Animal Science
- EB110 Economics of Agriculture
- MP220* ~~MP71~~ Computer Programming *Science*
- MP105 Calculus and Analytical Geometry II

Summer Session

- AE260 Surveying - 2 weeks

YEAR II

Semester C

- AE79 *Technology* Engineering Project
~~Technology Report~~
- AE30 Agricultural Mechanization ✓
- AE35 Material Handling and Processing
- AE340 Soil and Water (Engineering) ✓
- ~~MP70~~ Basic Statistics
- Approved Elective

Semester D

- AE80 *Technology Report* Technical Report on Project
- AE82 Engineering Measurements
- AE320 Agricultural Buildings Structures
- AE345 Energy in Agriculture
- H210 *H325* Communication and Extension Methods *Technology in Agric community*
- Approved Elective

¹If students have completed AE27, but not AE19, then AE19 will be required during the semester.

Farming Technology

The Nova Scotia Agricultural College offers a course to help students prepare for a career as a farmer on a self-employed basis, or as a manager on a commercial farm.

Students wishing to pursue studies leading to a Diploma of Technology in Farming register for the first year of the Agricultural Business, Animal Science, Plant Science or Agricultural Mechanization Technician course. After successful completion of the first year, their applications are considered for the Farming Technology Course. Students with equivalent prerequisites from other college programs can also be considered. If accepted, the student's program of study includes a minimum of three semesters of prescribed courses and eleven months of on-farm training. Seven months of the on-farm training is under the direction of a farming instructor.

Entrance Requirements

Satisfactory completion of Year One in the Agricultural Business, Agricultural Mechanization, Animal Science or Plant Science Technician course and a satisfactory selection interview.

Syllabus

Four months of approved farm experience must be completed before Semester A.

YEAR I Required Subjects

Semester A

AS29 Farm Practices
C12 Introductory Soils
C14 Agricultural Chemistry
EB10 Accounting
EB40 Marketing Practices
EB240 Farm Management
PS40 Field Crops I

Semester B

AE15 Oil Hydraulics
AE34 Farm Tractors
C13 Soil Management for
Crop Production
EB11 App. Acct. & Taxation
EB220 Production Economics
H10 Technical Writing
MP14 Computational Methods
MP15 Physics
PS41 Field Crops II

On-Farm Training – a seventh-month contract is developed among the College, the student and a training farmer, following the first year of the program. This is considered Semester C of the program.

YEAR II Required Subjects

Semester D

EB42 Applied Farm Management
EB72 Farm Project

All students accepted into the course must have 12 credits based on the work of the previous year.

In order to satisfactorily complete the requirements for a Diploma of Technology in Farming, a student must complete all required subjects, the On-Farm Training, thirteen of the approved electives, and fulfill the experience requirement.

AE19 Tech Drawing

Approved Electives

Semester A

AE12 Drafting
AE13 Shopwork
AE14 Surveying
AE30 Farm Machinery
AE32 Farm Buildings
AS34 Animal Nutrition
AS47 Animal Health
AS53 Poultry Production
AS54 Horse Production
AS55 Fur Production
B13 Plant Identification
B18 Animal Genetics
B20 Animal Physiology
B43 Entomology
B47 Farm Woodlot Management
EB12 Macroeconomics
PS39 Greenhouse Management
PS43 ~~Berry Crops~~ *Small Fruit Crops*
PS53 Vegetable Crops
Humanities Subject

Semester B or D

AE20 Shopwork Practices
AE36 Controls & Processing
AE38 Horticultural Engineering
AE45 Soil and Water Management
AS33 Applied Animal Physiology
AS35 Feeds & Feeding
AS44 Animal Breeding
AS50 Dairy Production
AS51 Beef & Sheep Production
AS52 Swine Production
B40 Plant Pathology
B41 Plant Physiology
B46 Weed Science
EB13 Microeconomics
EB41 Business Law
PS10 Plant Science Skills
PS42 Cash Crops & Seed Production
PS44 Tree Fruit Crops
PS49 Potato Production
PS76 Plant Products Physiology

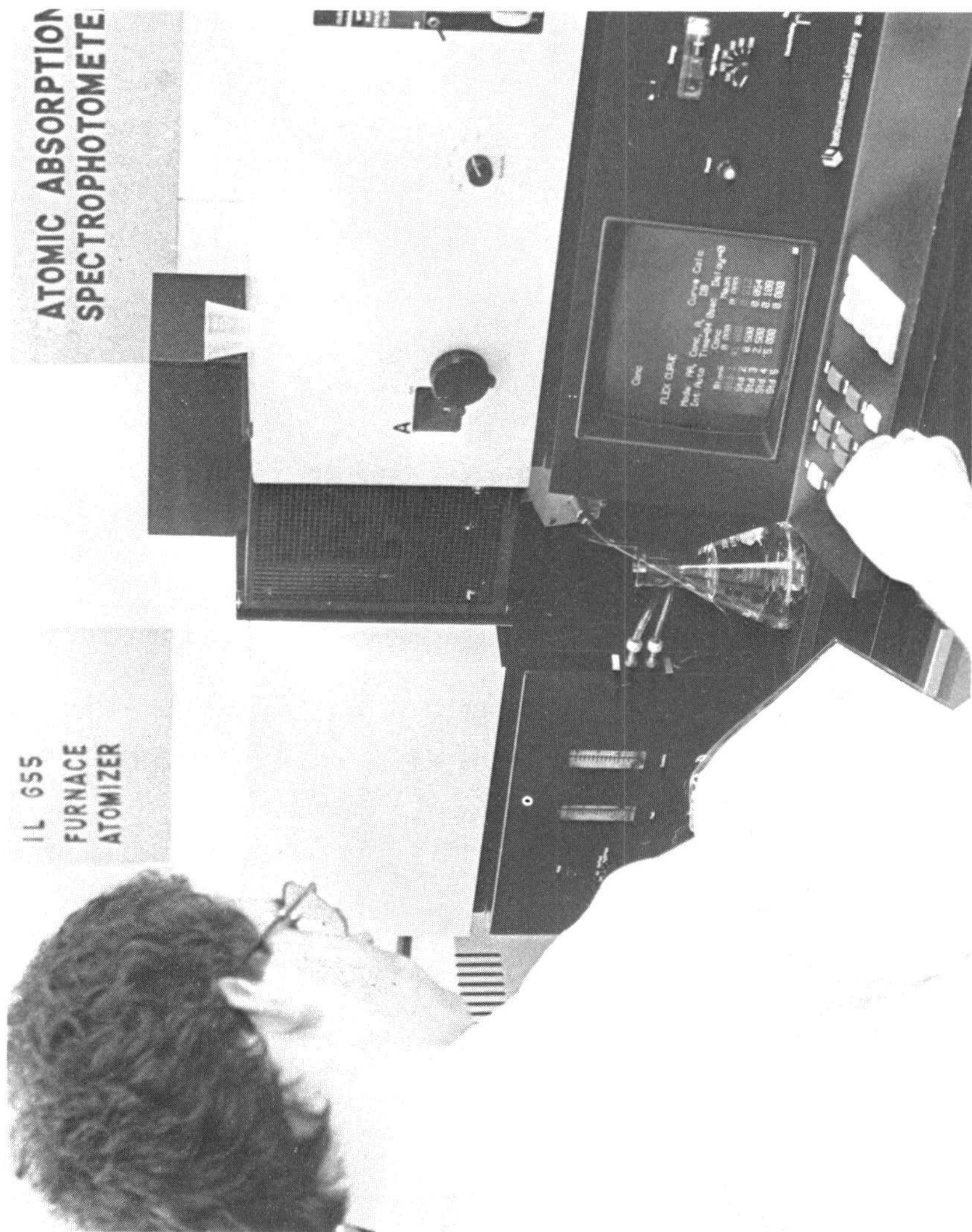
Qualification for all Diplomas of Technology

Students who complete all the requirements with no mark below 50% of the maximum mark obtainable will be granted a Diploma of Technology (Dipl. T.).

A high honours diploma will be awarded to a student who has attained an average of at least 80%, and an honours diploma to one who has attained an average of at least 75%.

IL 655
FURNACE
ATOMIZER

ATOMIC ABSORPTION
SPECTROPHOTOMETE





Engineering Laboratory, NSAC

Description of Subjects

The subject descriptions are grouped according to discipline and are in alphabetical and numerical order.

The Faculty reserves the right to make any necessary revisions or additions.

Agricultural Engineering

AE 12: **Drafting**

Instructors: **Prof. Townsend and Mr. Morash**

Designed to help the student become proficient in this field. This is accomplished by practice printing, the use of instruments and freehand sketches, or orthographic, oblique and isometric drawings. Blueprint reading and tracing are also introduced.

Fall semester – 1 lec and 4 labs per week.

AE 13: **Shopwork**

Instructors: **Messrs. Burr, Morash, Hampton, and Bhola**

The selection, operation and maintenance of workshop tools including the power grinder, drill press, fly press, metal- and wood-cutting bandsaws, iron worker, metal bender, squaring shears, box and pan and cornice brake, forming rolls; and of woodworking equipment such as: table saw, jointer, thicknesser, radial arm saw, wood lather, etc.; also use of portable wood- and metalworking tools. Students are introduced to the operation of a metal lathe and milling machine. Considerable welding is done using electric, acetylene, and spot welding machines. Some practice is given on the hard-to-weld metals such as aluminum and magnesium alloys. Identification and heat treatment of metals are also studied.

Fall semester – 2 lecs and 4 labs per week.

AE 14: **Surveying**

Instructor: **Prof. Richard**

An introduction to surveying principles, methods and recording techniques. Fall students are given lectures and assignments to assist in understanding the principles employed in surveying and they practice these during the labs by conducting various surveying exercises. Practice is gained in proper use of surveying instruments – tape, level and transit – through exercises involving measurements of horizontal and vertical distances and angles. These include chaining, stadia, benchmark, profile and contour leveling, triangulation and traverse exercises, and construction surveying with emphasis on their application to farm construction projects.

Fall semester – 2 lecs and 4 labs per week.

AE 15: Oil Hydraulics

Instructor: **Prof. Richard**

Introduction to pressure and flow concepts of oil as applied to hydraulic systems. Pressure and flow theory and principles of pump, actuator, and valve operations are discussed. Open centered, closed centered, and pilot-operated hydraulic systems, hydrostatic transmission, power steering, hydraulic motors and other accessories found on farm machinery are studied. Selection, maintenance, repair procedures and standards are introduced.

Winter semester – 3 lecs and 2 labs per week.

AE 19: Technical Drawing

Instructors: **Prof. Cunningham and Mr. Morash**

Prerequisite: **AE 12**

Includes pictorial drawings and sketches, both architectural and mechanical. Practice is obtained in drawing sections, developing irregular shapes, preparing farm buildings construction drawings, and measuring areas using various methods, including planimeters. Throughout the course, students are encouraged to develop their own style, building on basics gained in drafting. They also make their own blueprints to determine the effect of varying line weights and drafting aids.

Winter semester – 1 lec and 4 labs per week.

AE 20: Shopwork Practices

Instructors: **Messrs. Burr, Morash, Hampton and Bhola**

Prerequisite: **AE 13**

Consists of individual projects undertaken by students, using the skills acquired in shopwork. These projects are selected by the student from prescribed projects and may be of metal or wood or a composite, utilizing the shop equipment and machinery in the metalworking, welding, and woodworking shops. Projects are agriculturally oriented.

Winter semester – 2 lecs and 4 labs per week.

AE 23: Farm Equipment Dealership

Instructor: **Prof. Cunningham**

A spring course during which the student studies and works with a selected farm equipment dealer-instructor. Instruction covers all aspects of the farm equipment dealership operation. Students are rated on a specific list of skills and procedures.

Spring term – 6 weeks.

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AE 27: Welding

Instructors: **Messrs. Burr and Hampton**

Prerequisite: **AE 13**

Principles and practices of oxyacetylene and electric arc welding, cutting and brazing of cast iron and steel in flat, vertical and overhead positions. Safety precautions, electrode selection, welding and spot welding machine design are investigated. Demonstrations and practice include ferrous and nonferrous welding. Weld strength may be determined by the use of a modern tensile testing machine.

Winter semester – 2 lecs and 4 labs per week.

AE 30: Farm Machinery

Instructor: **Prof. Richard**

Prerequisite: **AE 15**

Operating principles of the basic types of farm machinery. Tillage, planting, chemicals and fertilizer application, harvesting equipment and power transfer are studied. Functional requirements and economic analysis of machinery selection are covered. Laboratory periods emphasize adjustment, calibration and maintenance of the machinery.

Fall semester – 2 lecs and 4 labs per week.

AE 32: Farm Buildings

Instructor: **Prof. Cunningham**

Prerequisite: **AE 12**

Deals with construction and layout of farm buildings and includes the study of construction techniques and design considerations. Included are such topics as materials, space requirements and building layout, structural requirements, and insulation and ventilation. Students are required to prepare drawings of building features and components, as well as material lists from construction drawings, and to become familiar with standards of all classes of farm buildings through use of codes of recommended building practice.

Fall semester – 2 lecs and 4 labs per week.

AE 34: Farm Tractors

Instructor: **Prof. Cunningham**

Prerequisite: **AE 15**

Introduction to the principles of power generation and transmission as applied to farm tractors. Two and four stroke gasoline and diesel engines are studied and compared. Operation principles and components of transmissions are discussed, including gear types and ratios, lubrication, auxiliary transmissions, hydraulic drives and differentials. Basic concepts of performance testing, maintenance and operation are introduced.

Winter semester – 2 lecs and 4 labs per week.

AGRICULTURAL ENGINEERING

AE 36: Controls & Processing

Instructor: **Prof. Townsend**

Prerequisite: **AE 12**

The study of AC and its application in the processing and handling of various farmstead materials. Students gain knowledge of basic wiring, special switches and controls, AC motor operation and electric heaters, enabling them to identify troubles during critical situations and to correct them. Processing and handling methods and the related equipment are studied. The area of materials handling is explored through various problems and assignments, and field visits are arranged for students to view various related materials handling equipment.

Winter semester – 2 lecs and 4 labs per week.

AE 38: Horticultural Engineering

Instructor: **Prof. Townsend**

Small gasoline engine structure and operating theory with emphasis placed on maintenance of the engine wherever possible. This course includes basic hydraulic theory emphasizing the operation of common systems in use today. Horticultural machinery selection, operation and adjustments are discussed. The principles of mixing, placing and curing concrete, along with the use of iron and wood for fences, walls and furnishings are taught with regard to the importance of durability.

Winter semester – 2 lecs and 4 labs per week.

AE 45: Soil and Water Management

Instructor: **Prof. Havard**

Prerequisite: **AE 14**

Fundamentals of soil and water engineering with application to agricultural and recreational lands. The course deals with rudimentary hydrology, soil erosion, drainage systems, irrigation systems, marshland improvement and other associated topics. Laboratory periods cover design problems, project field labs and tours.

Winter semester – 2 lecs and 4 labs per week.

AE 47: Project/Seminar

Instructors: **Department Staff**

Presentation of a seminar and written report on an approved agricultural mechanization or farm equipment topic. Lecture reviews method of presentation and preparation of selected topics. Projects under supervision of selected staff members.

Winter semester – 1 lec and labs to be arranged.

AE 48: Shop Management

Instructor: **Prof. Cunningham**

A study of the management of a farm equipment dealership. Topics include organizational structure; responsibilities of each level of management and of each department within the dealership; communication within each department, with

AGRICULTURAL ENGINEERING

each other, and with the customer; controls involved, including work orders, time records, parts inventory control.

Fall semester – 3 lecs and 2 labs per week.

AE 49: Electrical Systems

Instructor: **Prof. Townsend**

Electric circuits and components on engines and tractors are studied. Basic theory is given and test equipment used for checking electrical systems.

Fall semester – 2 lecs and 4 labs per week.

AE 63: Tractor Power

Instructor: **Prof. Cunningham**

Prerequisite: **AE 15**

The theory and type of diesel and gasoline engines and the principles and theory of power development and transmission in farm tractors are studied. Small engines are included. Test equipment is used during the lab work.

Fall semester – 2 lecs and 4 labs per week.

AE 64: Tractor Overhaul I

Instructor: **To be announced**

Prerequisite: **AE 63**

Complete diagnosis, cost estimating and overhaul of tractor engines and transmissions. The theory and knowledge gained in previous courses are used along with overhaul techniques introduced in this course.

Fall semester – 1 lec and 6 labs per week.

AE 65: Tractor Overhaul II

Instructor: **To be announced**

Prerequisite: **AE 64**

A continuation of the analyzing, estimating and overhauling of different parts and types of tractors with appropriate record keeping as carried out in Tractor Overhaul I.

Winter semester – 1 lec and 6 labs per week.

AE 66: Field Equipment Overhaul I

Instructor: **Prof. Townsend**

Prerequisite: **AE 15**

Experience in overhauling of field equipment is given by developing a system of inspection, estimating repairs and parts required, and developing probable costs. Overhauling of equipment is carried out and appropriate records and tests are made.

Fall semester – 1 lec and 6 labs per week.

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AE 67: **Field Equipment Overhaul II**

Instructor: **Prof. Townsend**

Prerequisite: **AE 66**

The experience and methods developed in Field Equipment I along with the good work habits established are continued.

Winter semester – 1 lec and 6 labs per week.

AE 68: **Farmstead Equipment Overhaul**

Instructor: **To be announced**

Prerequisite: **AE 15**

Equipment used within and around buildings is overhauled after first analyzing the individual equipment and establishing the repairs and parts required with the probable costs.

Winter semester – 1 lec and 6 labs per week.

AE 100: **Graphics and Projection**

Instructor: **Prof. Adams**

Freehand sketching and instrument drawing are used to explore the fundamental principles of projection and to apply these to the solution of problems of orthographic projection in descriptive geometry as required by the design process. Emphasis is placed on the application of graphical techniques to the solution of engineering problems.

Fall semester – 2 lecs and 4 labs per week.

Text – A.S. Levens, *Graphics-Analysis and Conceptual Design*.

AE 110: **Statics**

Instructor: **Prof. Havard**

Deals with forces acting on bodies at rest in two and three dimensions. Concepts of equilibrium and equivalent force systems are used to analyze structures, frames and machines. Friction, centroids and moments of inertia are introduced to develop the student's ability to analyze and solve problems in a logical manner.

Fall semester – 3 lecs and 3 labs per week.

Text – Beer & Johnson, *Vector Mechanics for Engineers*.

AE 150: **Agricultural Engineering Principles**

Instructor: **To be announced**

Intended to familiarize the student with the basic principles of agricultural engineering. Principles of engineering calculations and design are presented. Farm machinery and structures are introduced and their characteristics and operating principles explained. Principles of surveying and soil and water engineering are introduced. These topics lie within the general agriculture context.

Fall or winter semester – 2 lecs and 4 labs per week (first offered 1983-84).

Text – Roth et al., *An Introduction to Agricultural Engineering*, AVI.

AGRICULTURAL ENGINEERING

AE 205: **Graphics and Design**

Instructor: **Prof. Adams**

Prerequisite: **AE 100**

Graphical techniques are applied to vector analysis of design problems and to the presentation of design data. Design practices are investigated and used in student projects aimed at developing creativity in the design process.

Winter semester – 1 lec and 4 labs per week.

Text – A.S. Levens, *Graphics-Analysis and Conceptual Design*.

AE 220: **Dynamics of Particles**

Instructor: **To be announced**

Provides the background for describing particle and line motion. This includes relative, rectilinear, curvilinear and rotational motion of particles. Force, impulse momentum and work methods of analysis are introduced.

Fall semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – Beer and Johnson, *Vector Mechanics for Engineers*.

AE 225: **Dynamics of Rigid Bodies**

Instructor: **To be announced**

Prerequisite: **AE 220**

A continuation of the dynamics of particles developed in AE 220 to apply to rigid bodies. Plane motion of rigid bodies is emphasized.

Winter semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – Beer and Johnson, *Vector Mechanics for Engineers*.

AE 260: **Surveying**

Instructor: **Prof. Richard**

An introduction to the use of surveying instruments and practices. Distance measurements, differential and profile leveling, and transit traverses are covered. Error calculating is introduced and principles of surveying for construction are developed.

2 weeks following winter semester.

Text – Kissan, *Surveying Practice*.

AGRICULTURAL ENGINEERING

AE 310: **Thermodynamics**

Instructor: **Prof. Havard**

A study of the conservation of energy and mass in flow and non-flow systems and processes; application of the first and second laws in cycles using ideal gases and vapors, including the properties of liquids and vapors, processes and cycles, and energy balances.

Fall semester – 3 lecs and 3 labs per week.

Text – Von Wylen and Sonntag, *Fundamentals of Classical Thermodynamics*, S1 Version (2nd edition).

AE 315: **Strength of Materials**

Instructor: **Prof. Saxon**

Consists of the analysis of mechanical structures with respect to the loads applied and the resulting deformations. This permits the selection of materials with the required dimensions for the structures. Topics covered include centric loading, principal stresses, flexural loading, deflection of beams and shafts, torsional loading, combined loadings.

Winter semester – 3 lecs and 2 labs per week.

Text – Higdon, Ohlsen, Stiles and Weese, *Mechanics of Materials* (3rd edition).

AE 320: **Agricultural Structures**

Instructor: **Prof. Adams**

An introduction to farmstead design, layouts and plans, environmental conditions and functional requirements of structures for product storage and livestock. Construction methods and material standards considered.

Winter semester – 3 lecs and 3 labs per week.

Texts – *Canadian Farm Building Code*.

– *Midwest Plan Service Structures and Environment Handbook*.

AE 330: **Agricultural Mechanization**

Instructor: **To be announced**

Crop production equipment including tillage, application, and harvesting machinery is studied as separate units and as part of the production system. Operating principles and design parameters are covered and machinery management and selection principles introduced.

Fall semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – Hunt, *Farm Power and Machinery Management*.

AGRICULTURAL ENGINEERING

AE 335: **Material Handling and Processing**

Instructor: **To be announced**

Conception and operating principles of handling and processing equipment used on the farm. Characteristics, selection and design are covered. Principles of system analysis and operation research are introduced.

Fall semester – 2 lecs and 4 labs per week (first offered in 1983-84).

Text – Hall, *Processing Equipment for Agricultural Products*, AVI.

AE 340: **Soil and Water**

Instructor: **To be announced**

Fundamental hydrology related to soil and water projects in agriculture. Design criteria for land drainage, land forming, land clearing, irrigation, ditching. Special problems inherent to Atlantic agriculture are studied, such as marsh reclamation, erosion control practices and stream bank stabilization.

Fall semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – Schwab et al., *Soil and Water Conservation Engineering*.

AE 345: **Energy in Agriculture**

Instructor: **To be announced**

Introduction to world energy situation and use of energy in agriculture and food production. Production and conversion of energy in rural conditions. Energy use and conservation in field production and tractor operation, animal production, horticultural and greenhouse production, and in irrigation and water management practices.

Fall or winter semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – Stout, *Energy for World Agriculture*, FAO.

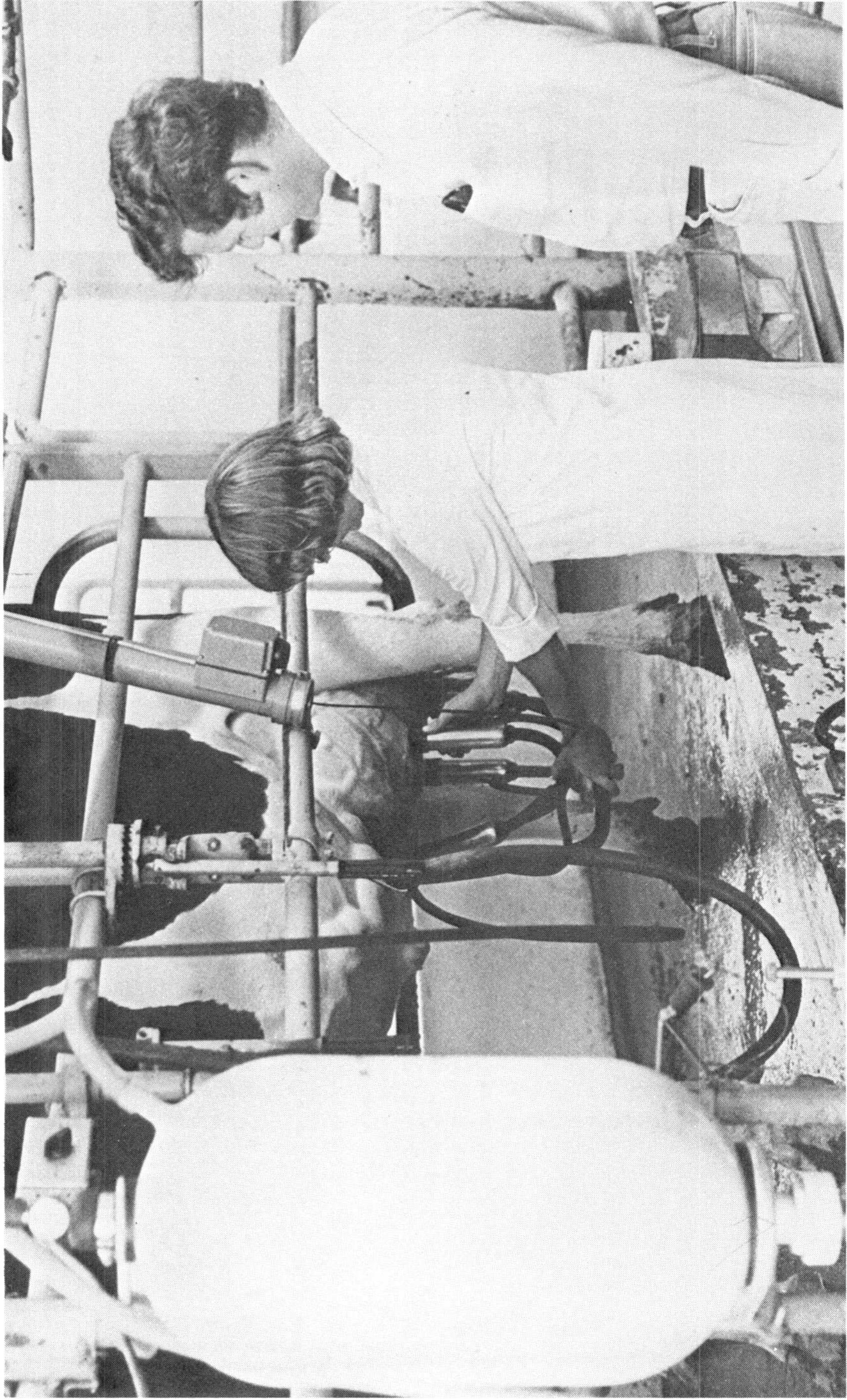
AE 350: **Fluid Mechanics**

Instructor: **Prof. Havard**

A study of physical properties of liquids and gases, fluid statics, and fluid flow – including pressure, Manometry hydrostatic forces, stream lines and tubes, continuity, momentum, Bernoulli equation, flow measurement, viscous flow and dimensionless numbers.

Winter semester – 3 lecs and 2 labs per week.

Text – Streeter, *Fluid Mechanics*.



Techniques for milking high producers – Animal Science class, NSAC.

Animal Science

AS 29: **Farm Practices**

Instructors: **Interdisciplinary Staff**

Students are expected to develop a basic understanding of farm practices so that they can perform with a minimum of supervision in work requiring the use of such practices as:

- tractor operation
- operation of forage harvesting equipment
- operation of tillage equipment
- typing
- farm production records
- milking
- farm animal control and handling
- birth and management of young farm animals
- welding
- operation and use of chain saw
- calibration of crop application equipment
- fencing
- field measurement and yield calculation.

These skills may be learned on-campus or on approved farms, and a final evaluation on each practice is recorded. A student may extend the time for completing this course over more than one semester.

AS 30: **Animal Science**

Instructor: **Prof. Forbes**

Examines the place of livestock on Atlantic Region farms with some emphasis on the integration of crops and livestock. A study of the needs of livestock for feeding, housing and the maintenance of health, and examination of management.

Winter semester – 3 lecs and 2 labs per week.

AS 33: **Applied Animal Physiology**

Instructor: **Prof. Crober**

Deals with aspects of animal function of particular relevance to animal production. Subject areas include reproduction, growth and development, digestion and metabolism, and environmental physiology. Emphasis is placed on practical details.

Winter semester – 2 lecs and 2 labs per week.

AS 34: Animal Nutrition

Instructor: **Prof. Cock**

Covers the principles of the nutrition of animals. Emphasis is given to the needs and use of specific nutrients.

Fall semester – 3 lecs per week.

Text – Maynard and Loosli, *Animal Nutrition*.

AS 35: Feeds and Feeding

Instructor: **Prof. Cock**

Prerequisite: **AS 34**

Teaches the basic composition of feeds, the methods of feed formulation, and the use of nutrient requirements tables. Specialized feeding programs discussed in relation to domestic animals.

Winter semester – 2 lecs and 2 labs per week.

Text – Church, *Livestock Feeds and Feeding*.

AS 37: Laboratory Animal Care

Instructor: **Prof. Crober**

Prerequisites: **B 18, B 20 and AS 34**

Designed to instruct the student in the proper care and handling of the laboratory animal. Characteristics and requirements of relevant species are reviewed. Additional techniques learned are those regularly used in research and teaching.

Winter semester – 2 lecs and 2 labs per week.

AS 44: Animal Breeding

Instructor: **Prof. Mathewson**

Prerequisite: **B 18**

Deals with the principles and mechanisms of inheritance in farm animals, with the principles and methods of selection and breeding, and with the improvement programs currently employed in different farm species.

Winter semester – 3 lecs per week.

Text – Dalton, *An Introduction to Practical Breeding*.

AS 45: Project/Seminar

Instructors: **Animal Science Staff**

Provides an opportunity to examine, in detail, specific agricultural topics of interest to the students. Projects are organized and carried out by the students under the supervision of various staff members. Students are required to start their project at the beginning of the first semester.

Winter semester – 2 labs (to be assigned) per week.

AS 47: Animal Health

Instructor: **Prof. Long**

Teaches the student about organismal and other causes of disease and how to recognize health and ill health and to understand the principles of disease prevention and treatment.

Fall semester – 3 lecs and 2 labs per week.

AS 50: Dairy Production

Instructor: **Prof. Cock**

Prerequisites: **B 18, B 20 and AS 34**

Deals with management of dairy cattle and goats, and the production of dairy products. Lectures and laboratories cover breeding, feeding, housing, marketing, processing and economics.

Winter semester – 3 lecs and 2 labs per week.

AS 51: Beef & Sheep Production

Instructor: **Prof. Mathewson**

Prerequisites: **B 18, B 20 and AS 34**

Deals with the objectives and methods of producing beef cattle, sheep and wool, both from an industry viewpoint and (at greater length) from the viewpoint of the individual producer. There is practical emphasis with visits to outside herds and flocks as well as use of the college animals.

Winter semester – 3 lecs and 2 labs per week.

AS 52: Swine Production

Instructor: **Prof. Anderson**

Prerequisites: **B 18, B 20 and AS 34**

A study of swine production both as an industry and as a major farm enterprise. The economic swine production unit is the framework for the course with studies in the practical aspects of reproduction, feeding, breeding and management integrated to maximize the operation of the swine enterprise as a whole.

Winter semester – 2 lecs and 2 labs per week.

Text – Pond and Maner, *Swine Production in Temperate and Tropical Environments*.

ANIMAL SCIENCE

AS 53: **Poultry Production**

Instructor: **Prof. Crober**

Prerequisites: **B 18, B 20 and AS 34**

Covers the principles and procedures relating to the production and marketing of poultry meat and eggs, including operation and management. Practical aspects are emphasized.

Fall semester – 2 lecs and 2 labs per week.

AS 54: **Horse Production**

Instructor: **Prof. Forbes**

Prerequisites: **B 18, B 20 and AS 34**

Includes both the theoretical and practical aspects of horse care. Lectures cover history, local industry, breeds and selection, nutrition, reproduction, health and management. Laboratory work emphasizes the practical aspects of the lecture material.

Fall semester – 2 lecs and 2 labs per week.

AS 55: **Fur Production**

Instructor: **To be announced**

Prerequisites: **B 18, B 20 and AS 34**

Covers the principles and procedures relating to the production and marketing of fur, including the operation and management of fur ranches in the Atlantic Region. Emphasis is on practical aspects.

AS 100: **Introductory Animal Science**

Instructors: **Profs. Crober, Mathewson and Cock**

An introduction to the principles of commercial animal agriculture. Topics include breeding systems, physiology of reproduction and lactation, animal nutrition, a survey of animal agriculture and applied management skills.

Winter semester – 3 lecs and 2 labs per week.

Text – Hammond, *Farm Animals*.

AS 300: **Physiology of Farm Animals**

Instructor: **Prof. Crober**

Prerequisites: **AS 100, B 110**

A study of the function of the animal body with particular emphasis on digestion, metabolism, growth, reproduction and endocrine regulation. Other areas covered include respiration, excretion and the cardiovascular and nervous systems.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

AS 305: Animal Nutrition

Instructor: **Prof. Anderson**

Prerequisites: **AS 100 and C 205**

A study of the principles of nutrition including the digestion, absorption and metabolism of nutrients by domestic animals. Functions of protein, lipids, carbohydrates, vitamins and minerals are studied.

Fall semester – 3 lecs per week (first offered in 1983-84).

Text – Maynard, Loosli, Hintz and Warner, *Animal Nutrition*.

AS 310: Animal Breeding

Instructor: **To be announced**

Prerequisites: **AS 100, B 245**

Deals with variation in animal performance and with the means whereby transmissible superiority may be recognized and put to use in achieving genetic improvement. Goals in improvement are discussed for each farm species and programs employed are studied in each case.

Fall semester – 3 lecs per week (first offered in 1983-84).

AS 315: Reproductive Physiology

Instructor: **To be announced**

Prerequisite: **AS 300**

A study of the physiology of reproductive processes in animals and birds. Areas discussed include gamete production, and reproductive cycles, control mechanisms, artificial insemination, modification of reproductive rate and embryo transfer, and subfertility.

Winter semester – 2 lecs and 2 labs per week (first offered in 1983-84).

AS 320: Animal Health

Instructor: **To be announced**

Prerequisite: **AS 100**

Seeks to impart an understanding of animal health and its importance in livestock production enterprises. Students are taught to recognize signs of health and ill-health and to understand the principles and practices of disease prevention and treatment.

Conditions of disease and ill-health common in Atlantic Canada are studied. The need for veterinary collaboration is emphasized and the circumstances in which this should be sought are discussed.

Winter semester – 3 lecs and 2 labs per week (first offered in 1983-84).

AS 325: Feeds and Feeding

Instructor: **Prof. Cock**

Prerequisite: **AS 305**

A study of typical feedstuffs and commercial feeding practice. The principles of nutrition are applied in the formulation of rations.

Winter semester – 2 lecs and 2 labs per week (first offered in 1983-84).

Text – Church, *Livestock Feeds and Feeding*.

AS 335: Environmental Physiology

Instructor: **To be announced**

Prerequisite: **AS 300**

A study of animals in relation to their environment. The influence of environmental factors on body processes and their relationship to productive efficiency in intensive and extensive production systems are examined. Major topics include temperature regulation and body homeostasis, biological rhythms, photoperiodism and environmental and hormonal interrelationships.

Winter semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 340: Animal Behavior

Instructor: **To be announced**

Prerequisites: **AS 300, AS 310**

A study of the behavior of farm animals including poultry. Topics covered include domestication, learning and conditioned response, animal communication, agonistic and social behavior, reproductive and maternal behavior, behavior modification, development of behavior, genetics of behavior, the influence of management systems and practices on behavioral characteristics, and the relationship between behavior and performance.

Fall semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 345: Dairy Processing

Instructor: **To be announced**

Prerequisite: **AS 100**

A study of the composition and processing of milk and milk products. Marketing and consumer acceptance are also discussed.

Winter semester – 3 lecs and 2 labs per week (first offered in 1984-85).

ANIMAL SCIENCE

AS 350: Meat Science

Instructor: **To be announced**

Prerequisites: **AS 100, C 200**

Deals with the preparation of red meat and poultry carcasses and with the proportionate and quality aspects of their component tissues. There is discussion of methods of carcass appraisal and grading in the different species and of the effects of storage, freezing, chilling, transportation, cutting, processing and consumer acceptance and pricing.

Winter semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 435: Poultry Product Technology

Instructor: **Prof. Crober**

Prerequisites: **AS 100, B 225**

A study of the nature and composition of poultry products and by-products, and of appropriate handling and processing procedures for particular products. Areas covered include sanitation and grade standards for eggs and poultry meat, storage of eggs, and processing of egg products and poultry.

Fall semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 450: Seminar and Project

Instructor: **Animal Science Staff**

Prerequisite: **Animal Science Major in final year or consent of the instructor**

Animal Science majors in their final year select, in consultation with a faculty advisor, a research area. This area is investigated and reported orally and in a scientific paper. Other areas of current interest are also presented and discussed in the weekly seminar period. The subject is credited in the winter semester but will commence with the fall semester.

Both semesters – 2 labs per week (first offered in 1984-85).

**Animal Production Courses
(AS 400-AS 430 inclusive)**

Application of the sciences of genetics, physiology, nutrition and behavior to farm animals. Management systems that apply and integrate these sciences for maximum production and economic return are examined. Courses include studies of the individual species industries in the Atlantic Provinces, Canada and the world. The resources for production and marketing, and the efficiency of animals as producers of human food are examined and compared.

Prerequisites: **AS 300, AS 305, AS 310**

AS 400: Dairy Production

Instructor: **Prof. Cock**

Fall semester – 3 lecs and 2 labs per week (first offered in 1984-85).

Text – Schmidt and VanVleck, *Principles of Dairy Science*.

AS 405: Swine Production

Instructor: **Prof. Anderson**

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – Pond & Moner, *Swine Production in Temperate and Tropical Environments*.

AS 410: Horse Production

Instructor: **Prof. Forbes**

Winter semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 415: Beef Production

Instructor: **Prof. Mathewson**

Fall semester – 2 lecs and 2 labs per week (first offered in 1984-85).

AS 420: Sheep Production

Instructor: **Prof. Mathewson**

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

AS 425: Poultry Production

Instructor: **Prof. Crober**

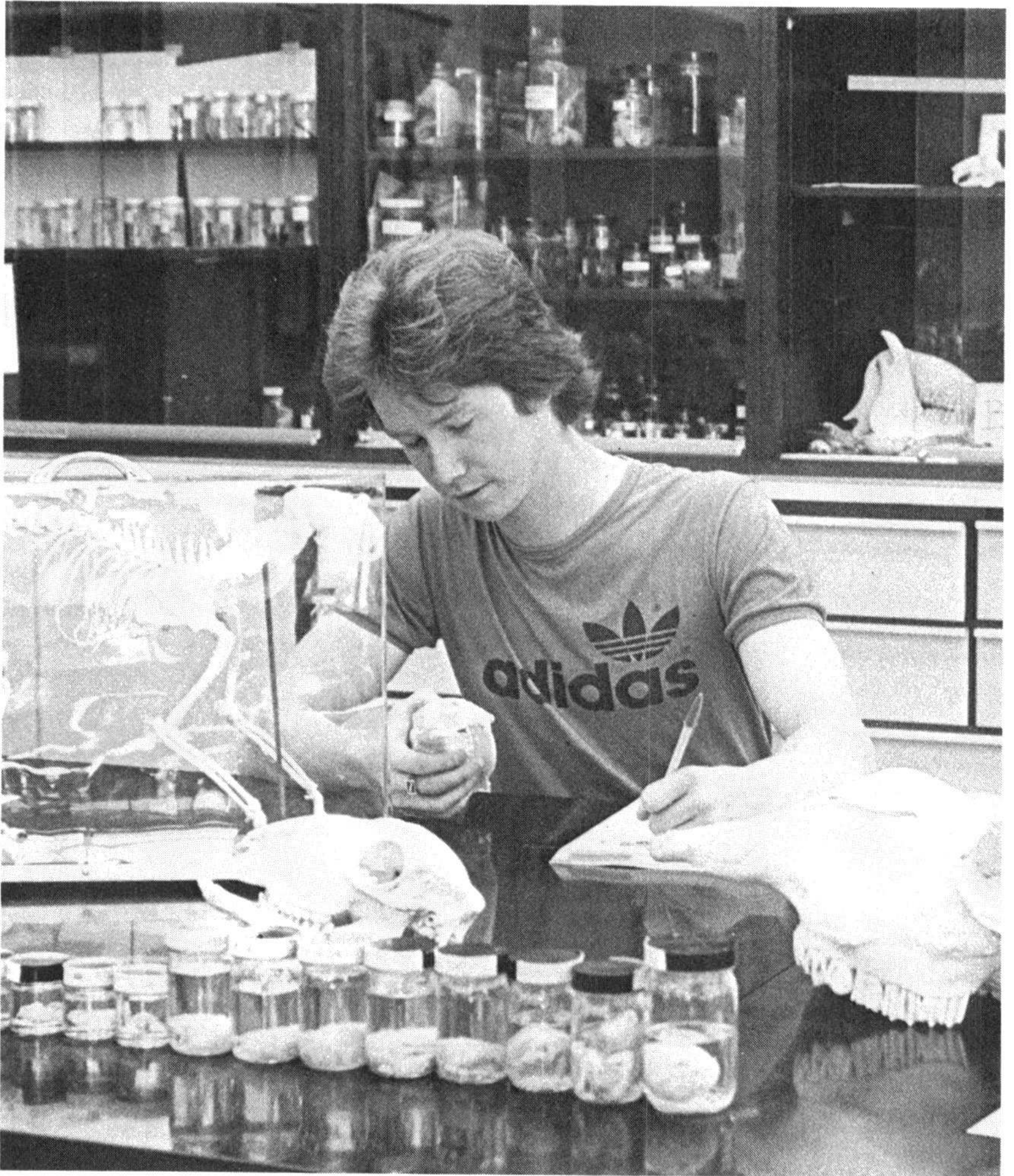
Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

AS 430: Fur Animal Production

Instructor: **To be announced**

Winter semester – 2 lecs and 2 labs per week (first offered in 1984-85).

Biology



Biology Lab at NSAC.

B 01: Pre-Tech Biology

Instructors: **Prof. LeBlanc and Mr. Fergus**

An introduction to the basic principles of plant and animal biology that are most important to agriculture. Topics include plant structure and function, growth and reproduction, plant nutrition, animal anatomy and function, animal systems, animal nutrition, photobiology, introductory genetics, introductory ecology.

Winter semester – 3 lecs and 4 labs per week.

BIOLOGY

B 13: **Plant Identification**

Instructor: **Prof. Prange**

Covers the classification and naming of plants, with special attention to common species of the Atlantic Provinces. Important plant families are considered, and there is laboratory work in identification. Students are required to make a collection of pressed plants, properly identified and labelled.

Fall semester – 2 lecs and 3 labs per week.

Texts – Roland, *The Flora of Nova Scotia*.
– Mulligan, *Common Weeds of Canada*.

B 18: **Animal Genetics**

Instructor: **Prof. Eaton**

A study of the basic principles of inheritance and variation in animal populations and the application of those principles in animal breeding, particularly in relation to farm animals.

Fall semester – 3 lecs and 2 labs per week.

B 20: **Animal Physiology**

Instructor: **Prof. Eaton**

Designed to provide a basis in the knowledge of animal physiology as it applies to farm animals. The course includes topics on blood and circulation, digestion and absorption, excretion, respiration and reproduction, as well as a brief consideration of the skeletal and muscular systems.

Fall semester – 3 lecs and 2 labs per week.

Text – Frandson, *Anatomy and Physiology of Farm Animals*.

B 40: **Plant Pathology**

Instructor: **Prof. McFadden**

An introductory course dealing with the nature, cause and control of plant diseases due to infectious and noninfectious agents. Included are discussions on the infection process, resistance mechanisms, the effects of environment on disease development, as well as the safe use and handling of fungicides to control important diseases in the region.

Winter semester – 2 lecs and 3 labs per week.

B 41: **Plant Physiology**

Instructor: **Prof. Prange**

Deals with plant structure and function, as well as plant growth, development, and reproduction. Various plant processes, such as photosynthesis, respiration, absorption and nutrition, water movement, transpiration, and growth are studied. Topics of importance to agriculture, such as growth regulators, photoperiodism and dormancy are also considered.

Winter semester – 3 lecs and 3 labs per week.

BIOLOGY

B 42: **Botanical Laboratory Techniques**

Instructor: **Prof. Eaton**

A practical course stressing the essentials of plant propagation, transplanting and growing techniques used in the greenhouse. Emphasis is placed on the culture of algae, fungi, pteridophytes and bryophytes commonly used for teaching and laboratory experiments. Included is an introduction to tissue culture techniques, and a major project.

Winter semester – 2 lecs and 3 labs per week.

B 43: **Entomology**

Instructor: **Prof. LeBlanc**

An introduction to the study of the phylum Arthropoda, with particular reference to the class Hexapoda (insects), emphasizing some insect pests of Atlantic Canada. Anatomy, physiology, taxonomy, behavior and ecology of insects are considered during lectures and laboratory work. Discussions on the relation of insects to man, basics of insect control methods and pesticide safety are included.

Fall semester – 3 lecs and 2 labs per week.

B 44: **Microbiology I**

Instructor: **Prof. Stratton**

An introduction to the science of microbiology. Lectures are concerned with the concepts of microbial classification, structure, microscopic observation, isolation, cultivation, nutrition, growth, metabolism, and identification. Special attention is given to the relationships of micro-organisms of water and foods. Laboratory work stresses the principles and procedures of staining, preparation of microbial media, isolation techniques, culturing, biochemical tests and identification.

Fall semester – 2 lecs and 3 labs per week.

Text – Pelczar and Chan, *Elements of Microbiology*.

B 45: **Microbiology II**

Instructor: **Prof. Stratton**

A continuation of Microbiology I. Lectures are concerned with infection and immunity, mutation, soil microbiology, ruminant microbiology, mycotoxins in feeds, silage microbiology, production of industrial and medicinal compounds. Laboratory work stresses isolation and identification of unknowns, followed by detailed studies of certain agricultural topics including soil, milk, water, and foods.

Winter semester – 2 lecs and 3 labs per week.

Text – Pelczar and Chan, *Elements of Microbiology*.

BIOLOGY

B 46: **Weed Science**

Instructor: **To be announced**

Deals with the principles of weed science in relation to agricultural practices in the region. Included are discussions on weed recognition, chemical and non-chemical approaches to controlling weeds in vegetable, fruit and grain crops as well as lawns and non-crop areas. Selection, safe use, handling, and storage of herbicides are stressed.

Winter semester – 3 lecs and 3 labs per week.

B 47: **Farm Woodlot Management**

Instructor: **Prof. Robertson**

The farm woodlot resource is described and management procedures are explained and illustrated. Special attention is given to the production and harvesting of saw logs, pulpwood, Xmas trees, fuel wood and maple sap. Development programs administered by provincial government departments are covered.

Fall semester – 2 lecs and 3 labs per week.

B 70: **Microtechniques I**

Instructor: **Prof. L. Crosby**

Preparation of temporary and permanent whole mounts for microscopic examination; preparation of bio-plastic mounts and of blood smears; use of haemocytometer; study of the principles of operation of the microscope including the light microscope and several other types.

Fall semester – 3 lecs and 4 labs per week.

Texts – Knudsen, *Biological Techniques*.

– Berlyn and Miksche, *Botanical Microtechnique and Cytochemistry*.

B 71: **Microtechniques II**

Instructor: **Prof. L. Crosby**

Prerequisite: **B 70**

A continuation of Microtechniques I. Use of the microtome; staining and slide preparation; and histochemical techniques.

Winter semester – 2 lecs and 4 labs per week.

Text – Preece, *A Manual for Histologic Technicians*.

B 76: **Plant Protection**

Instructors: **Prof. McFadden and Staff**

An introduction to the principles of protecting plants from diseases, insects and weeds. Included is a study of the more important problems affecting crops in the Maritimes. The safe use and handling of fungicides, insecticides and herbicides are emphasized.

Winter semester – 3 lecs and 3 labs per week.

BIOLOGY

B 100: **The Plant Kingdom**

Instructor: **Prof. McFadden**

An evolutionary approach to the study of the members of the Plant Kingdom, including algae, fungi, bryophytes, vascular cryptogams and the seed bearing plants. Emphasis is placed on their habitats, morphology and reproductive cycles.

Fall semester – 3 lecs and 4 labs per week.

Text – Burns, *The Plant Kingdom*.

B 110: **The Animal Kingdom**

Instructor: **Prof. Crosby**

An evolutionary review of the Animal Kingdom with reference to the classification, morphology and life cycles of representatives of the Kingdoms Protista and Animalia. An introduction to vertebrate embryology and vertebrate histology is also considered.

Winter semester – 3 lecs and 4 labs per week.

Text and laboratory manual – Storer, Usinger, Stebbins and Nybakken, *General Zoology* (6th edition).

Woodsdalek and Lytle, *General Zoology, Laboratory Guide, Complete Version* (8th edition).

B 200: **Cell Biology**

Instructor: **Prof. Crosby**

An introduction to the structure and function of procaryotic and eucaryotic cells. Emphasis is placed on the ultra structure and biochemical significance of cellular organelles. Topics considered include bioenergetics, biosynthesis of macromolecules, regulation of metabolic processes, photosynthesis, glycolysis, respiration, membranes, several types of specialized cells.

Fall semester – 3 lectures per week plus a major assignment.

Text – Novikoff and Holtzman, *Cells and Organelles*.

B 225: **Microbiology**

Instructor: **Prof. Stratton**

A general introduction to microbiology. Topics include history, morphology, structure, cultivation, reproduction, metabolism, genetics, classification and control of micro-organisms. The importance of micro-organisms to soil productivity, foods, industry, veterinary science, public health and sanitation is discussed.

Winter semester – 3 lecs and 3 labs per week.

Text – Pelezar, Reid and Chan, *Microbiology* (4th edition).

BIOLOGY

B 240: **Introduction to Genetics**

Instructor: **Prof. Padmanathan**

Study of heredity and variation in plants and animals, including man; the relationships of genetics to evolution and breeding practices.

Fall semester – 3 lecs and 2 labs per week.

Text – To be announced.

B 245: **Agricultural Genetics**

Instructor: **Prof. Padmanathan**

Prerequisite: **B 240**

Further study of genetic material and population genetics. Emphasis is placed on application of genetics to plant and animal improvement.

Winter semester – 3 lecs and 2 labs per week.

Text – To be announced.

B 260: **Plant Physiology**

Instructor: **Prof. Eaton**

A study of the different functions of the plant including growth, photosynthesis, mineral nutrition, water relations and translocation of solutes, plant orientation, development and reproduction.

Winter semester – 3 lecs and 2 labs per week.

Text – Salisbury and Ross, *Plant Physiology* (2nd edition).

B 300: **Principles of Plant Pathology**

Instructor: **Prof. McFadden**

Deals with the principles of plant pathology and the control of diseases caused by bacteria, fungi, mycoplasmal-like organisms, viruses and nematodes.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – Agrios, *Plant Pathology* (2nd edition).

B 305: **Economic Plant Pathology**

Instructor: **Prof. McFadden**

Prerequisite: **B 200**

An in-depth study of the important diseases in the Atlantic Region with particular attention to diseases affecting field crops, fruit and vegetable crops, turfgrasses and greenhouse crops. Included are a research project and seminar.

Winter semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – Agrios, *Plant Pathology* (2nd edition).

BIOLOGY

B 310: **Mycology**

Instructor: **To be announced**

An introductory course dealing with the morphology, taxonomy, and physiology of the members of the kingdom fungi, with special emphasis on important plant parasites.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – To be announced.

B 320: **General Entomology**

Instructor: **Prof. LeBlanc**

An introduction to the science of Entomology in an agricultural perspective. Insect anatomy, physiology and taxonomy are considered; also included are discussions on insect behavior, reproduction, life cycles and population ecology. Basics of monitoring techniques and population dynamics are illustrated with some Atlantic Canada insect pests.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – Borror et al., *Introduction to the Study of Insects* (5th edition).

B 325: **Economic Entomology**

Instructor: **Prof. LeBlanc**

Prerequisite: **B 320**

An introduction to the study of Economic Entomology in an agricultural perspective. Principles of insect control – natural, mechanical, physical, cultural, biological and legal – in the Atlantic region are covered. Includes chemical control: pesticide development, formulation and application and pesticide safety. This course stresses the theory of integrated pest management.

Winter semester – 3 lecs and 2 labs per week (first offered in 1983-84).

Text – To be announced.

B 330: **Ecology**

Instructor: **Prof. Prange**

An introductory course dealing with ecological principles as they relate to individuals, populations and communities. The interactions between organisms and the physical environment are discussed, along with the various types of communities found in the Atlantic Provinces.

Fall semester – 3 lecs and 3 labs per week.

Text – To be announced.

B 335: Weed Science

Instructor: **To be announced**

Deals with the principles of weed science in relation to agricultural practices in the region. Included are discussions on weed recognition, chemical and non-chemical approaches to controlling weeds in vegetable, fruit and grain crops as well as lawns and non-crop areas. The selection, safe use, handling and storage of herbicides are stressed along with the environmental impact of the different methods of weed control.

Fall semester – 3 lecs and 3 labs per week (first offered in 1983-84).

Text – To be announced.

B 400: Soil Biology

Instructor: **Prof. Stratton**

A study of the biology of the various classes of organisms in soil, including bacteria, blue-green algae, fungi, algae, protozoa, lower invertebrates and viruses. This course includes details of biochemical transformation of carbon, nitrogen, sulfur and phosphorous, as well as pesticides and wastes in the environment.

Fall semester – 3 lecs and 3 labs per week (first offered in 1984-85).

B 449: Seminar and Project

Instructors: **Department Faculty and Staff**

Critical reviews of important topics in plant protection including discussions, and written and oral presentations. Projects are designed to assist students in understanding the basic principles of disease development and control.

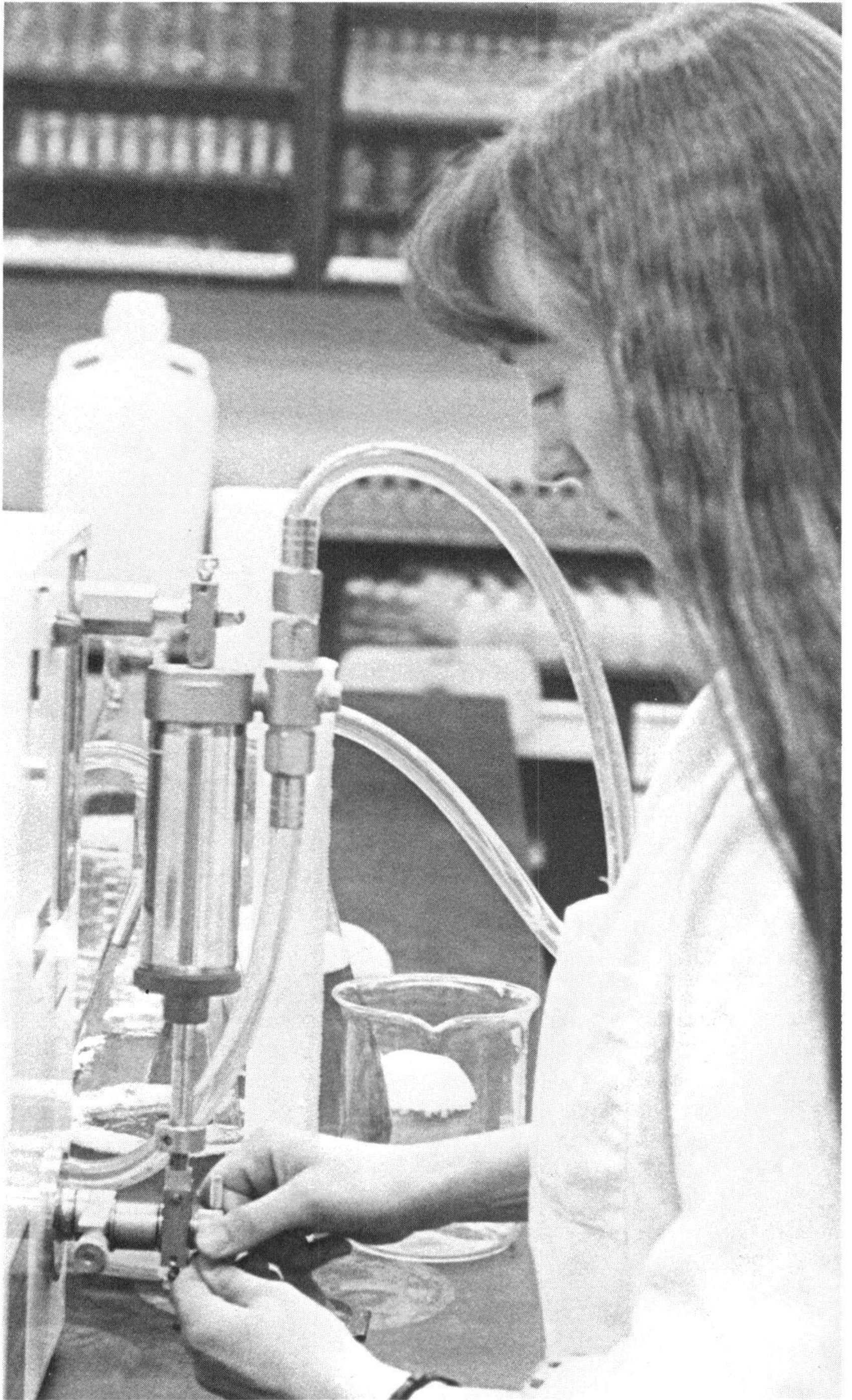
Fall semester – 3 lecs per week (first offered in 1984-85).

B 450: Seminar and Project

Instructors: **Department Faculty and Staff**

Critical reviews of important topics in plant protection including discussions, and written and oral presentations. Projects are designed to assist students to understand the principles of disease development and control.

Winter semester – 3 lecs per week (first offered in 1984-85).



Chemistry

C 01: Pre-Tech Chemistry

Instructor: **Prof. Hawley**

An introductory course emphasizing measurement in chemistry, matter and energy, atomic structure, electronic arrangement of the atom and chemical bonding. The periodic table is studied and considerable emphasis placed on the use of symbols, formulae, equations and reactions. Some time is also spent on chemical kinetics, problem solving, solutions and electrolysis, acid-base reaction.

Winter semester – 3 lecs and 2 labs per week.

C 12: Introductory Soils

Instructor: **Prof. Warman**

Designed to introduce the importance of properties of soils related to fertility and productivity. Soils are studied with particular reference to soil composition, texture, structure, clay content, organic matter, soil water, soil air, soil temperatures, compaction, drainage, soil development processes, and soil profiles. Atlantic Provinces soils are examined in the laboratory to help students understand and manage soils from a physical aspect.

Fall semester – 3 lecs and 2 labs per week.

Text – Donahue et al., *Soils: An Introduction to Soils and Plant Growth* (4th edition).

C 13: Soil Management for Crop Production

Instructor: **Prof. Warman**

Prerequisite: **C 12**

A study of the chemical properties of soils and chemical reactions associated with soil components and additives such as fertilizers, limestones and organic materials as they relate to plant growth. Essential plant nutrients are emphasized. The relationship of soil additives to growing crops and soil management is discussed.

Winter semester – 3 lecs and 2 labs per week

Text – Donahue et al., *Soils: An Introduction to Soils and Plant Growth* (4th edition).

C 14: Agricultural Chemistry

Instructor: **Prof. Hawley**

Stresses the application of basic chemistry to the agricultural industry. Topics include chemical arithmetic, protection chemicals, sewage disposal, explosives, energy, iron, useful materials from the earth, sea and air; chemurgy; water; metallurgy; nuclear chemistry; chemical hazards. Students are also introduced to organic chemistry and applied biochemistry, and are taught to identify carbohydrates, proteins, fats, oils and the vitamins, enzymes, hormones and nucleic acids.

Fall semester – 3 lecs and 2 labs per week.

Text – Jones et al., *Chemistry Man and Society* (3rd edition).

C 40: Chemistry Laboratory Techniques I

Instructor: **Prof. Robinson**

An introduction to general chemistry techniques relating to normal laboratory procedures. Instruction in the use and handling of toxic chemicals, in the potential hazards associated with various pieces of laboratory equipment, laboratory reports, glass working, responsibilities of a chemistry laboratory worker, the mathematical calculation of typical chemical problems. The laboratory exercises serve as an introduction to some of the chemicals, methods and equipment used in the normal chemistry laboratory.

Fall semester – 4 labs per week.

Text – Shugar et al., *Chemical Technicians Ready Reference Handbook*.

C 41: Chemistry Laboratory Techniques II

Instructor: **Prof. Robinson**

Designed to assist students in organizing, understanding, using and evaluating chemical calculations and problems. The material presents a practical foundation for techniques of solving chemical laboratory problems in the preparation of solutions, expressions of concentration, dilution problems, preparation of graphs, calculations in gravimetric and titrimetric analysis and miscellaneous calculations. The subject material also deals with various hazards encountered in a chemistry laboratory and introduces the students to glass blowing procedures and methods.

Winter semester – 4 labs per week.

C 42: Organic Chemistry

Instructor: **Prof. Payne**

An introductory course designed to familiarize the student with the theories and principles of organic chemistry as they apply to certain basic classes of organic compounds including alkanes, alkenes, alkynes, polyolefins, aromatic hydrocarbons, alcohols and mercaptans. The nomenclature of these classes of compounds and their application to plant and animal life are stressed. Laboratory procedures are correlated with lecture material; modern procedures and techniques are employed to illustrate the preparation, extraction, purification, properties and reactions of various organic compounds discussed.

Fall semester – 3 lecs and 4 labs per week.

Text – Hart and Schuetz, *Organic Chemistry* (5th edition).
Laboratory Manual – Mimeographed procedures.

CHEMISTRY

C 43: **Bio-Organic Chemistry**

Instructor: **Prof. Payne**

Prerequisite: **C 42**

A continuation of the introduction to the basic classes of organic compounds. Aldehydes, ketones, amines, carboxylic acids and their derivatives are studied. The student is also introduced to biochemistry through a preliminary study of carbohydrates, lipids, proteins, nucleic acids, vitamins, hormones, and enzymes. Laboratory exercises closely parallel the topics presented in lecture and are designed to make the student aware of the properties and reactions characteristic of the organic and biochemical compounds studied.

Winter semester – 3 lecs and 4 labs per week.

Text – Hart and Schuetz, *Organic Chemistry* (5th edition).

Laboratory manual – Mimeographed procedures.

C 44: **Instrumentation I**

Instructors: **Profs. MacLean, Robinson and Mr. Crosby**

An introduction to the theory and practical basic skills of the more commonly used instrumental methods of analysis. The areas covered are: colorimetry including auto-analyser techniques, atomic absorption, flame photometry, turbidimetry, polarimetry and refractometry.

Winter semester – 2 lecs and 3 labs per week.

Text – Bauer et al., *Instrumental Analysis*.

C 45: **Qualitative Analysis**

Instructor: **Prof. Hawley**

Semi-microanalysis is used to evaluate the qualitative nature of inorganic and organic agricultural materials. Theory includes separations and reactions of Groups I-IV cations and anions, solutions, equilibria, Law of Mass Action, solubility products, hydrolysis, common ion effect, electrolytes, electrolysis, redox reactions, complex ions, oxidation potentials, pH indicators, buffers.

Fall semester – 3 lecs and 4 labs per week.

Text – Layde and Busch, *Introduction to Qualitative Analysis*.

CHEMISTRY

C 46: **Quantitative Analysis**

Instructors: **Prof. MacDonnell and Mr. Mullin**

Prerequisite: **C 45**

Introduces the student to basic analytical principles and techniques. The lecture portion of the course includes evaluation of analytical data, preparation of samples for analysis, principles of gravimetric analysis, acid-base titrations, oxidation-reduction methods including potentiometric titrations, precipitation and complex formation titrations, colorimetry and an introduction to instrumentation. The laboratory portion of the course is designed to illustrate the analytical principles studied in lecture and to enable the student to develop good analytical technique. Wherever possible, agricultural materials are used for analysis.

Winter semester – 3 lecs and 4 labs per week.

Text – Fritz and Schenk, *Quantative Analytical Chemistry* (4th edition).

C 70: **Instrumentation II**

Instructor: **Prof. MacLean**

A study of the more advanced methods of absorption and emission spectroscopy and an introduction to thermo and electro chemistry. The following methods are studied: ultra violet and infrared absorption, spectroscope and optical emission spectography, calorimetry, potentiometry including specific ion electrodes and conductivity.

Fall semester – 3 lecs and 4 labs per week.

Text – Bauer et al., *Instrumental Analysis*.

C 71: **Instrumentation III**

Instructor: **Prof. MacLean**

A continuation of the study of the theory and practical techniques of electrochemistry followed by a study of instrumental separation techniques and an introduction to radioactivity measurements. Topics are electrolysis, polarography, gas-liquid, paper, thin-layer, column and ion exchange chromatography; electrophoresis and radioactivity.

Winter semester – 3 lecs and 4 labs per week.

Text – Bauer et al., *Instrumental Analysis*.

C 73: **Laboratory Organization and Management**

Instructor: **Prof. MacLean**

Designed to familiarize students with the design, planning, organization and operation of modern chemistry laboratories. Recording and keeping of records and reports of analytical results are also studied. Specifically arranged for Chemistry Laboratory Technology students, the course emphasizes understanding all phases of laboratory operation with special reference to a technologist's area of participation in it.

Winter semester – 2 lecs and 4 labs per week.

CHEMISTRY

C 75: **Food Chemistry I**

Instructor: **Prof. Robinson**

Prerequisite: **C 42, C 43, C 45, C 46**

A study of the chemistry and technology of carbohydrates, fats and proteins. Attention is directed towards the basic principles involved in their determination in foods and feeds. The laboratory deals with the qualitative and quantitative physical and chemical techniques used in the analysis of foods and feeds.

Fall semester – 3 lecs and 4 labs per week.

Text – Meyer, *Food Chemistry*.

C 76: **Food Chemistry II**

Instructor: **Prof. Robinson**

A study of the composition, chemistry and technology of various products such as milk, eggs, meats, and cereals. The laboratory deals with the qualitative and quantitative physical and chemical techniques used in the analysis of agricultural products.

Winter semester – 3 lecs and 4 labs per week.

Text: Meyer, *Food Chemistry*.

C 79: **Project Organization**

Instructors: **Chemistry Staff**

A chemistry project organized on an individual basis with each student.

Fall semester – 6 to 8 labs per week as assigned.

C 80: **Project Implementation**

Instructors: **Chemistry Staff**

A seminar program with subject matter related to material covered in C 79 project.

Winter semester – 6 to 8 labs per week as assigned.

C 100: **Chemical Principles**

Instructors: **Profs. MacConnell, Payne and Mr. Crosby.**

A study of atomic theory, periodicity, chemical reactions, thermo chemistry, geometrical forms of molecules, chemical equilibrium and oxidation-reduction reactions. Also included is an extensive study of the chemistry of solutions of weak electrolytes.

Fall semester – 3 lecs and 4 labs per week.

Text – Masterton and Slowinski, *Chemical Principles Using the International System of Units* (4th edition).

CHEMISTRY

C 110: **Organic Chemistry**

Instructor: **Prof. Hawley**

Prerequisite: **C 100**

A study of basic classes of organic compounds including alkanes, alkynes, petroleum and petrochemicals, cycloparaffins, alcohols, aldehydes, ketones, alkyl halides, monocarboxylic acids, acid anhydrides, salts, amides, ethers, and amines.

Winter semester – 3 lecs and 4 labs per week.

Text – Fessenden and Fessenden, *Organic Chemistry*.

C 200: **Bio-Organic**

Instructor: **Prof. MacConnell**

Prerequisite: **C 110**

This course consists of a study of biological elements, buffers, amino acids and peptides, proteins, lipids, membrane structures, carbohydrates, nucleic acids, enzymes.

Fall semester – 3 lecs and 4 labs per week.

Text – Bohinski, *Modern Concepts in Biochemistry* (3rd edition).

C 205: **Biochemistry**

Instructors: **Profs. MacConnell, Payne and Robinson**

Prerequisite: **C 200**

Includes a study of enzyme kinetics, mechanisms of enzyme action, vitamins and coenzymes, digestion and absorption, bioenergetics, catabolism of carbohydrates, lipids and nitrogen compounds, selected biosyntheses, nitrogen fixation, metabolism control mechanisms.

Winter semester – 3 lecs and 4 labs per week.

Text – Bohinski, *Modern Concepts in Biochemistry* (3rd edition).

C 220: **Introduction to Soil Science**

Instructor: **Prof. Warman**

Prerequisites: **C 100, C 110**

General principles of soil science relating to the origin, development and classification of soils; the physical and chemical properties of soils and their relation to soil management, crop production, soil problems, land use, trace elements and pesticides.

Fall semester – 3 lecs and 4 labs per week.

Text – Brady, *The Nature and Properties of Soil* (8th edition).

CHEMISTRY

C 300: **Physical Chemistry**

Instructor: **To be announced**

Prerequisites: **C 100, MP 100**

An introductory course which includes a study of gas laws, kinetic theory of gases, thermodynamics, the liquid and solid state, phase changes, chemical equilibrium, nonelectrolyte solutions, electrolyte solutions, colloids, electrochemical cells, chemical kinetics, photochemistry.

Fall semester – 3 lecs and 4 labs per week (first offered 1983-84).

C 310: **Radiotracers in Agriculture**

Instructor: **Prof. Robinson**

Prerequisites: **C 200 or C 43, MP 100**

Intended to set forth the concepts of radioactivity necessary for the practical use of radiotracers in agriculture. The course covers radiation theory; radiation counting; sample preparation techniques for counting; applied tracer techniques in soil, plant and animal studies; isolation and identification of isotope label; and localization of label in a molecular structure.

Winter semester – 3 lecs and 4 labs per week (first offered 1983-84).

C 320: **Soil Fertility and Fertilizers**

Instructor: **Prof. Warman**

Prerequisite: **C 220**

Includes essential plant nutrients in the soil; influence of soil chemical and physical properties on nutrient absorption and plant growth; methods of evaluating soil fertility, composition and use of organic and inorganic sources of nutrients.

Winter semester – 3 lecs and 4 labs per week (first offered 1983-84).

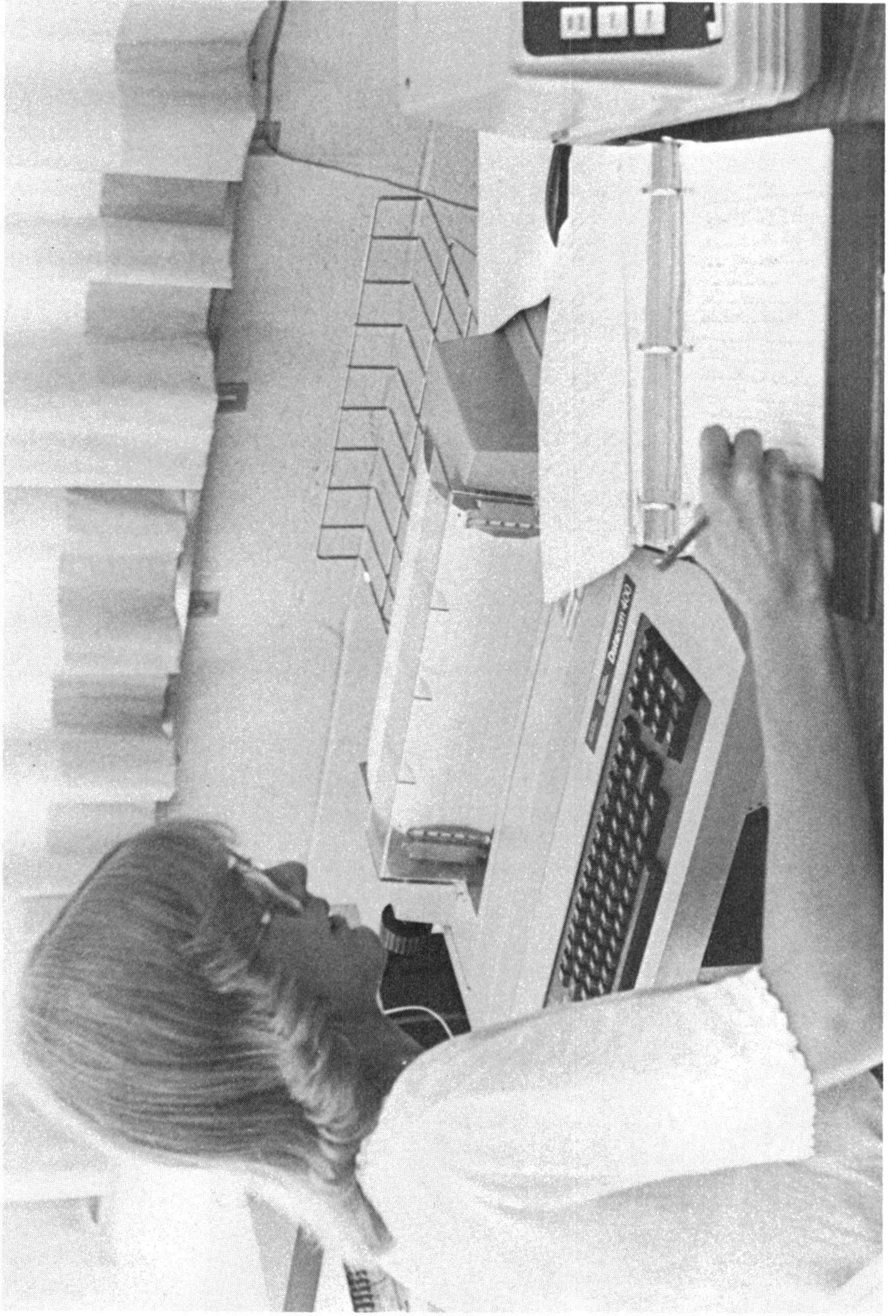
C 420: **Soil Classification and Survey**

Instructor: **To be announced**

Includes classification, distribution and use of major soil groups of the world, techniques of describing and mapping soils, interpretation and use of soil survey reports and aerial photography. Students are required to spend 2-3 weeks in the field before registration for training in soil mapping.

Fall semester – 3 lecs and 4 labs per week (first offered 1984-85).

Computers in a Management Lab, NSAC.



Economics and Business

EB 01: **Agricultural Industry**

Instructor: **To be announced**

Major emphasis is on information about the agricultural industry, rather than on specific agricultural topics or skills. The course is organized into 4 majors (segments): Animal Science, Plant Science, Agricultural Business, Agricultural Mechanization. During each segment, on-campus instruction is supplemented by visits to farms and farm-related business.

Winter semester – 2 lecs and 4 labs per week.

EB 10: **Accounting**

Instructor: **Prof. Arnfast**

The basic principles and procedures relevant to the accounting function of a business. Some topics discussed are recording transactions in an accounting system, year-end adjustments, purchases and sales, control of cash transactions and financial statements.

Fall semester – 3 lecs and 2 labs per week.

Text – Meigs et al., *Accounting: The Basis for Business Decisions*.

EB 11: **Applied Accounting & Taxation**

Instructor: **Prof. Arnfast**

Prerequisite: **EB 10**

Emphasizes the application of accounting principles and procedures to farm accounting situations. Some topics discussed are fixed assets and depreciation, inventories, payrolls, financial statements. Considerable time is spent on the study of Canadian income tax laws as they apply to the farm business.

Winter semester – 3 lecs and 2 labs per week.

EB 12: **Macroeconomics**

Instructor: **Prof. Tait**

An introduction to the study of macroeconomics in a Canadian context. Topics covered include national accounts, public finance, money and banking, and international trade. Current problems in the Canadian economy are drawn on to emphasize the theory.

Fall semester – 3 lecs per week.

Text – Armstrong, *The Canadian Economy & Its Problems*.

EB 13: **Microeconomics**

Instructor: **Prof. Tait**

An introduction to the theory of the firm. The course examines the theory of demand and supply, distribution of income, forms of business organizations in Canada, and the levels of competition in the agricultural industry. Application of the various theories to explain the agricultural industry is stressed.

Winter semester – 3 lecs per week.

EB 40: Marketing Practices

Instructor: **Prof. Ells**

Current practices involved in marketing farm products produced in the Atlantic Provinces are studied. The condition affecting these practices and the groups of people that can bring about changes are identified. Special attention is paid to consumer behavior, supplier behavior, market structures, price determination, marketing boards, and marketing commissions. Students visit a series of firms and organizations involved in marketing farm products. Managers of these organizations assist with the instruction.

Fall semester – 2 lecs and 3 labs per week.

EB 41: Business Law

Instructor: **Prof. Arnfast**

Introduces several topics relevant to the management of a business. Major topics discussed and studied are: types of business organizations, legal structure in Canada, criminal and civil law, contracts, mortgages, leins, insurance and marketing boards. Emphasis is placed on relating these topics to farm and farm-related business.

Winter semester – 3 lecs per week.

EB 42: Applied Farm Management

Instructor: **Prof. Tait**

Designed to transfer classroom teaching to real farm situations. Students have an opportunity to apply the principles of farm management on production farms. Some of the requirements involve analyzing farm records, doing credit analysis, developing farm plans, and evaluating machinery, livestock and crop decisions, based on actual farm cases.

Winter semester – 2 lecs and 4 labs per week.

EB 43: Business Project

Instructors: **Department Staff**

An opportunity to examine, in detail, specific agricultural topics of interest. Projects are organized and carried out by the students under the supervision of various staff members.

Fall semester – 5 labs per week.

EB 72: Farm Project

Instructors: **Committee headed by member of the Farm Management Department**

The farm project relates the college course program with the on-farm training. It stresses the application of information to a specific farm situation. For this project, the farm may be the home farm or any other farm. An intimate knowledge of the farm is necessary. The student, therefore, must have access to the farm and to detailed information about it.

The prepared project consists of three sections:

- a detailed inventory of land, buildings, machinery and all other farm resources. An analysis of the present farm operation.
- an outline of the student's objectives and projected plans for the farm.
- a practical step-by-step (year-by-year) program for the changes necessary to reach these goals.

The farm project is introduced in the first technology year, before the beginning of the seven months of on-farm training. All the required data for the farm inventory are collected during the on-farm training period. The final work on the prepared project is done in the last college semester. Though most of the work is done outside of the scheduled class time, one afternoon per week is scheduled for special instruction and for presentations. Each student is required to present a minimum of one seminar on his or her farm plan to the project class and the instructor committee.

Winter semester – 5 labs per week.

EB 110: Economics of Agriculture

Instructor: **Prof. Arnfast**

An introductory course designed to survey the areas of concentration in the agricultural economics and agribusiness discipline. Throughout the course, economic and business principles are presented and applied in an agricultural context. This introduces the student to the areas of the discipline and provides a means of understanding the structure and objectives of Canadian and Atlantic agriculture. Specific topic areas include introductions to the market model, market and price analysis, production economics, farm agribusiness analysis, policy and resources development.

Winter semester – 3 lecs per week.

EB 200: Microeconomics I

Instructor: **Prof. Stackhouse**

Introduces the principles of microeconomic theory. Alternate models of consumer and firm behavior are examined. Areas of emphasis include evaluation of individual and market demand and supply analysis, measurement and interpretation of elasticity, the theories of consumer choice, cost analysis of the firm, market classifications of competition, and evaluation of the firm in the various forms of competition.

Fall semester – 3 lecs per week.

ECONOMICS AND BUSINESS

EB 205: Microeconomics II

Instructor: **Prof. Stackhouse**

Prerequisite: **EB 200**

A continuation of the principles presented in Microeconomics I. The course examines firm decisions under conditions of imperfect competition, wages, rents, income distribution, general equilibrium, and introduces welfare economics.

Winter semester – 3 lecs per week.

EB 210: Financial Accounting I

Instructor: **Prof. Arnfast**

A study of the basic principles of procedure relevant to the accounting function of a business firm. Project work with farm and farm-related business records is included in the course to help the student acquire a working knowledge of these principles and procedures.

Fall semester – 3 lecs and 2 labs per week.

EB 215: Financial Accounting II

Instructor: **Prof. Arnfast**

Prerequisite: **EB 210**

Continues the study of financial accounting with emphasis on special topics and reporting of accounting information. Includes a brief introduction to income tax.

Winter semester – 3 lecs and 2 labs per week.

EB 220: Production Economics

Instructor: **Prof. Tait**

An introduction to the study of economic principles used to analyze production and resource use in agriculture. Areas of emphasis include economic examination of the factor-factor, factor-product, and product-product relationships of the farm production system. Practical examples and lab exercises are used to illustrate and reinforce the concepts presented in the classroom.

Winter semester – 2 lecs and 4 labs per week.

EB 230: Principles of Marketing

Instructor: **Prof. Stackhouse**

Designed to introduce the student to the principles of marketing. An attempt is made to relate these principles to what is actually happening in the marketing of Canada's agricultural products. The course utilizes both text and case material to give the student an understanding of the activities underlying the flow of goods from producer to consumer.

Fall semester – 3 lecs per week.

EB 255: Macroeconomics I

Instructor: **Prof. Stackhouse**

An introduction to the study of economics. The course is designed to acquaint the student with the main elements of macroeconomic theory. Emphasis is placed on the application of theories to current Canadian economic problems. Topics covered include system overview, national income analysis, monetary policy, fiscal policy, and international trade.

Winter semester – 3 lecs per week.

EB 260: Mathematical Economics

Instructor: **Prof. Stackhouse**

Prerequisites: **MP 100, EB 110, EB 200**

Introduction to the frequently used mathematical methods of economic analysis. The course also provides the student with the basics required in more advanced economics courses that have a quantitative content. Areas of concentration are: elements of mathematical economics models, linear models and matrix algebra, linear programming, applications of classical calculus to economic problems, and optimization theory.

Winter semester – 3 lecs per week.

EB 310: Cost Accounting

Instructor: **To be announced**

Prerequisites: **EB 210**

An introductory course in cost accounting principles, techniques, and procedures. Topics necessary for management planning and control are examined. An attempt is made to relate these topics to farm business situations.

Fall semester – 3 lecs and 2 labs per week (first offered 1983-84).

EB 320: Business Law

Instructor: **To be announced**

An introduction to general principles of law relating to the management of a business. Major areas studied are torts and contracts. Specialized topics include forms of business organizations, sale of goods, conditional sales, real property, mortgages, insurance and wills.

Winter semester – 3 lecs per week (first offered 1983-84).

EB 325: Operations Research

Instructor: **To be announced**

Prerequisites: **EB 260, MP 200**

Introduction to mathematical programming and gaming theory. Topics include linear programming, integer programming, sensitivity analysis, decisions under risk and uncertainty.

Fall semester – 3 lecs and 2 labs per week (first offered 1983-84).

ECONOMICS AND BUSINESS

EB 330: Agricultural Market and Price Analysis

Instructor: **Prof. Stackhouse**

Prerequisite: **EB 200**

Designed to introduce students to agricultural marketing and price analysis. In general, course topics represent applications of microeconomic theory and the purely competitive market model. Course also includes discussion of institutions in the agricultural industry.

Fall semester – 3 lecs per week (first offered 1983-84).

EB 335: Business Marketing

Instructor: **To be announced**

Designed to introduce basic marketing principles and their application to marketing problems. Topics such as promotion, pricing, distribution, and marketing research are examined. The case method of instruction is used extensively.

Winter semester – 3 lecs (first offered 1983-84).

EB 340: Farm Management I

Instructor: **Prof. Tait**

Principles and methods of organizing and analyzing farm businesses are examined. Practical problems associated with financial analysis, planning, capital budgeting, resource use and credit acquisition are included. The role of the farm manager is identified throughout.

Fall semester – 2 lecs and 4 labs per week (first offered 1983-84).

EB 355: Macroeconomics II

Instructor: **To be announced**

Prerequisite: **EB 255**

Development of the integrated aggregate model of the Canadian economy, which includes consideration of money, product and labor markets, and aggregate demand and supply.

Fall semester – 3 lecs per week (first offered 1983-84).

EB 400: Resource and Environmental Economics

Instructor: **To be announced**

Prerequisite: **EB 205**

Advanced microeconomics applied to issues of environmental quality and resource use. Topics include welfare economics, market failure, externalities, pricing of renewable and non-renewable resources, and cost benefit analysis.

Fall semester – 3 lecs per week (first offered 1984-85).

EB 410: Econometrics

Instructor: **To be announced**

Prerequisites: **EB 260, MP 200**

An applied course in statistics and economic theory using the classical linear regression model. Topics covered include specification of single and simultaneous models, violations of the assumptions of the classical linear model, hypothesis testing and tests of significance.

Fall semester – 3 lecs and 1 lab per week (first offered 1984-85).

EB 420: Agricultural Policy

Instructor: **To be announced**

Prerequisites: **EB 205, EB 325, EB 330, EB 355, EB 400, EB 410**

Goals and instruments of the policy process are examined and applied to national, provincial and regional issues. A thorough background in economic theory and methods is required.

Winter semester – 3 lecs per week (first offered 1984-85).

EB 425: Research Methods Seminar

Instructor: **To be announced**

Prerequisites: **EB 325, EB 330, EB 410**

Designed to evaluate specific methods used by agricultural economics researchers. Selected papers which address issues examined by the discipline are used. Students are expected to critically evaluate the methods and conclusions presented. Preparation of a research proposal and seminar on the topic area is also required.

Winter semester – 2 lecs and 2 labs per week (first offered 1984-85).

EB 440: Farm Management II

Instructor: **To be announced**

Prerequisites: **EB 325, EB 340**

An applied course intended to utilize farm management principles developed in Farm Management I. Students are introduced to computerized farm planning models and are required to apply these methods to actual farm problems.

Winter semester – 2 lecs and 3 labs per week (first offered 1984-85).

Athletic Centre – residences in background.



Humanities

H 01: **Language Development**

Instructor: **Prof. Sanger**

Designed to ensure that pretechnical students have an adequate grounding in grammar, spelling, and punctuation to meet the requirements for admission to H 10 Technical Writing; that they get exercise in technical communication; and that they have the opportunity to read and write about Canadian history and literature. The course consists of classroom instruction in grammar, spelling, and punctuation. There is heavy emphasis on the writing of tool and machine descriptions, notetaking, letter writing, and essays. At least two Canadian novels are studied. There is one major term paper and a final examination.

Winter semester – 3 lecs per week.

H 10: **Technical Writing**

Instructor: **Prof. Sanger**

Objective is to provide instruction in basic scientific report and review paper writing; grammar and spelling; business letter writing, with specific reference to the employment application letter and data sheet; and the cultural, social, and historical background of agriculture and its related trades. Students must write a major term paper.

Fall and Winter Semesters – 3 lecs per week.

H 11: **Modern Literature**

Instructor: **Prof. Sanger**

Objective is for students to study five or six modern North American, European, or Russian authors. Books by Greene, Pasternak, Atwood, Frost, Silone, Ringuet, Steinbeck, and Hemingway have been used. Students must write a major term paper.

Winter semester – 3 lecs per week.

H 12: **Leadership Development**

Instructor: **To be announced**

Designed to help students develop discussion techniques, leadership styles and skills in group dynamics. The tools of communication and related leadership skills are applied to problem-solving exercises involving study groups on work simplification topics. Through group study, practical solutions are applied to work problems with the object of finding easier and better ways to do special tasks, thus avoiding waste of time, money, materials, equipment and human resources. The role of community and agricultural organizations in initiating change is also considered.

Winter semester – 3 lecs per week.

HUMANITIES

H 20: **The Human Body and Fitness**

Instructors: **Profs. Marchant and J. Smith**

Designed to give students a basic understanding of human anatomy and physiology and its relationship to fitness. Emphasis is placed on applied anatomy and kinesiology as well as the effects of physical activity on the physiological processes in the human body (exercise physiology). Most lab work takes place in the gymnasium and stresses testing, lifelong recreation activities and their exercise value, and training principles.

Fall semester – 2 lecs and 2 labs per week.

H 120: **Sociology I**

Instructor: **Prof. MacEachern**

Through assigned readings from the text and in lectures, students are challenged to examine the question of the extent to which man is predetermined and/or predefined by his society. In this way, insight is provided into basic sociological concepts. The first part of the course focuses on the individual and the socialization process. The second part deals with concepts used to analyze the social organization of society. The third part centers on concepts related to social change. An in-depth study is made of society from a sociological base with the examination of a contemporary book.

Fall semester – 3 lecs per week.

Text – Landis, *Sociology Concepts and Characteristics* (3rd edition).

H 125: **Sociology II**

Instructor: **Prof. MacEachern**

An examination of society with emphasis on man in community. Affluence and poverty, the family, human values within society are considered.

Winter semester – 3 lecs per week.

Texts – Streib, *The Changing Family; Adaptation and Diversity*.
Mannes, *Last Rights*.
Frankl, *Man's Search for Meaning*.

HUMANITIES

H 140: **Personnel Management**

Instructors: **Profs. MacLeod and Saxon**

Introduces students to the basic concepts needed to understand the behavior of people at work. Included are topics associated with motivation, communication, and group relationships. Emphasis is placed on how students, as potential supervisors, may apply behavioral concepts in the work place and thereby contribute to improved employee performance. Students also examine the features of supervisory styles, elements of job design, effective introduction of change and overcoming barriers to communication. Besides the lectures, films and assigned readings, case studies are made by students on an individual and group basis. Case studies enable students to develop their decision-making abilities and to experience group dynamics.

Both semesters – 3 lecs per week.

Text – Reber and Terry, *Behavioral Insights for Supervision*.

H 150: **Agriculture Today**

Instructor: **Prof. Cock**

Deals mainly with the agricultural industry in the Atlantic Provinces. The influences of history, research, farm organization and other factors are discussed. Issues of world food problems, regional agricultural self-sufficiency and the changing public attitude towards agriculture are considered.

Winter semester – 3 lecs per week.

H 200: **Technical Writing and English and American Authors**

Instructor: **Prof. Sanger**

Objective is to provide instruction in basic scientific report and review paper writing; business letter writing, with specific reference to the employment application letter and data sheet; and American and British literature from the end of the eighteenth to the middle of the nineteenth centuries. Students must write a major term paper in the literature part of the course.

Fall semester – 3 lecs per week.

H 205: **Canadian Literature**

Instructor: **Prof. Sanger**

Objectives of this course are to provide a general survey of Canadian literature from colonial times to the present and to examine specifically four or five twentieth century Canadian novels. Books by Callaghan, MacLennan, Ringuet, Aguin, O'Hagan, Atwood, and Buckler have been used. Students must write a major term paper.

Winter semester – 3 lecs per week.

HUMANITIES

H 210: **Communications and Extension Methods**

Instructor: **Mr. Mildon**

Develops the student's awareness of basic patterns of communications in an agricultural context. Emphasis is placed on practical use of various types of communications media commonly used in agricultural extension work. The first part of the course concentrates on developing the personal and group communications skills of the student. In the second part, the student explores various kinds of media including newspapers, radio, television and film. Assignments include preparing advertising or publicity, making a radio tape, using photography, etc. The term project requires the students to produce an audio-visual presentation with an integrated sound track.

Winter semester – 1 lec and 2 labs per week.

H 220: **Introductory French**

Instructor: **Prof. Cipolla**

Aims to develop the student's use of French in the four language skills of listening, speaking, reading, and writing. A basic text and a workbook are used as well as various supplementary materials such as French films, newspapers, additional texts, recordings of speeches by public figures, and learning kits. Students also are assigned an individual project. A number of hour-long evaluations are given and the average of these is used to arrive at a summative mark.

Winter semester – 3 lecs per week.

Text – Valette and Valette, *Contacts, Langue et Culture Française*.

H 300: **History of Agriculture**

Instructor: **Prof. Sanger**

Objective of this course is to examine the development of agriculture from the seventeenth to the mid-twentieth centuries. Particular emphasis is placed upon North American changes. Students are encouraged to carry out local historical field work. The course also involves work with the NSAC Archival and Historic Collections. Students must write a major term paper.

Winter Semester – 3 seminars per week (first offered in 1983-84).

H 305

Mathematics and Physics

MP 01: **Pre-Tech Mathematics**

Instructor: **Prof. Buckler**

Mathematical concepts are applied to problems in agriculture. Topics are mathematical operations, percentage, linear and simultaneous equations, quadratic equations, exponents, logarithms, math of finance, ratio, proportion, variation. The S1 system of units is used throughout the course.

Winter semester – 2 lecs and 2 labs per week.

MP 14: **Computational Methods**

Instructors: **Profs. Madigan, Smith and Buckler**

A course to develop problem-solving and decision-making abilities and computational skills, both manual and machine. The course is based around the computer; mini and micro computer use in decision-making and computations is stressed. The problems are of a scientific and managerial nature, emphasizing agricultural applications. Some use of statistics is also included. The arithmetic and algebraic skills needed for the course are developed as the need arises through self-instructional modules.

Winter semester – 1 lec and 3 labs per week.

MP 15: **Physics**

Instructor: **Prof. Buckler**

The Physics course for technicians is designed to bring students deficient in Physics principles up to the grade XII level in topics important to the practice of agriculture. Such topics as measurement, mechanics, heat, and principles of electricity in both direct and alternating current are introduced. The laboratory part of the course consists of demonstration experiments and problem sessions.

Fall and winter semester – 3 lecs and 2 labs per week.

MP 40: **Electricity and Electrical Measurements**

Instructor: **Prof. Buckler**

A basic course in electricity and electrical measurements. Emphasis is placed on the study of series and parallel circuits, Ohm's Law and Kirchhoff's Law. Both direct current and alternating current problems and exercises are employed. Elements of magnetism, resistance, capacitance, inductance, impedance, power and resonance of the A.C. circuit are considered. The laboratory part of the course involves carrying out actual electrical measurements of a technical nature, in addition to verifying the laws studied. The techniques of handling and using electrical instruments are stressed and combined with theory to develop solutions to practical problems.

Fall semester – 2 lecs and 2 labs per week.

Text – Buhan and Schmitt, *Technical Electricity and Electronics*.

MATHEMATICS AND PHYSICS

MP 41: **Light and Optics**

Instructor: **Prof. Buckler**

A course in light and optics. It consists of the study of photometry, regular and diffused reflections, laws of reflection, mirrors, images, mirror formulas, optical density, index of refraction, laws of refraction, critical angle, lenses, ray diagrams, images, color, constructive and destructive interference, diffraction and polarization. In the laboratory part of the course, the student becomes involved in optical measurements that verify and demonstrate the elements studied, and extend the techniques of solving problems.

Winter semester – 2 lecs and 2 labs per week.

Text – To be announced.

MP 70: **Basic Statistics**

Instructor: **Prof. Padmanathan**

Populations and samples, frequency distributions, sampling theory, tests of hypotheses, linear regression and correlation, analysis of variance, discussion of experimental designs.

Winter Semester
~~Fall semester~~ – 3 lecs per week.

Text – To be announced.

MP 71: **Computer Programming**

Instructor: **Prof. Madigan**

Provides an introduction to the methods of computer programming through the BASIC language. Students become familiar with the operation of a time-sharing system by running their own programs.

Winter semester – 3 lecs and 2 labs per week.

MP 090: **Introductory Physics**

Instructor: **Prof. Saxon**

An introductory course for entering students who do not have the equivalent of Nova Scotia Grade XII Physics. Course topics are mechanics, heat, light and electricity. The laboratory emphasizes the experimental foundations of Physics and allows the student to acquire skills in measurement through practice.

Fall semester – 3 lecs and 4 labs per week.

Text – To be announced.

MATHEMATICS AND PHYSICS

MP 100: **Calculus and Analytic Geometry I**

Instructors: **Profs. Fraser and Madigan**

A study of limit and the derivative, with applications to maxima and minima, velocity and acceleration, differentiation of the trigonometric, exponential and logarithmic functions. Topics from Analytic Geometry are covered at appropriate stages throughout the course.

Fall semester – 4 lecs per week.

Text – Swokowski, *Calculus – A First Course*.

MP 105: **Calculus and Analytic Geometry II**

Instructors: **Profs. Fraser and Madigan**

A continuation of MP 100 dealing mainly with the integral calculus. Both definite and indefinite integrals are studied, with application to areas, volumes, hydrostatic pressure and work. The final part of this course deals with sequences and series. As in the case of MP 100, topics from Analytic Geometry are covered at appropriate stages of the course.

Winter semester – 4 lecs per week.

Text – Swokowski, *Calculus – A First Course*.

MP 110: **Modern Physics**

Instructor: **Prof. Smith**

A treatment of the conceptual foundations including mass, length, time, kinematics, Newton's Laws, frames of reference, relative motion including Galileon Relativity and Special Relativity, momentum, energy and the conservation principle and the conceptual foundations. The quantum nature of energy and an introduction to quantum mechanics, an investigation of the nucleus, with regard to nuclear structure, binding energy, and nuclear size; and nuclear reactions, particles and fission are discussed.

Winter semester – 3 lecs and 4 labs per week.

Text – Kone and Sternheim, *Physics*.

MP 130: **Physics for Life Sciences I**

Instructor: **Prof. Smith**

Basic Physics principles necessary for the understanding of instrumentation and biophysical topics form the core of the course. Topics include mechanics, motion and force, concepts of energy, pressure and fluid flow. Calorimetry and heat transfer methods are applied to such topics as basic metabolic rate and size of an animal. Elementary optics and optical instruments are treated, with application to biological research.

Fall semester – 3 lecs and 4 labs per week.

Text – Kone and Sternheim, *Physics*.

MATHEMATICS AND PHYSICS

MP 135: **Physics for Life Sciences II**

Instructor: **Prof. Smith**

A continuation of Physics MP 130. The electric charge, field, potential and simple electric circuits are taken up and their importance in instrumentation is explored. The magnetic field is included. The atom and the nucleus are explored, with relation to the process called radioactivity.

Winter semester – 3 lecs and 4 labs per week.

Text – Kone and Sternheim, *Physics*.

MP 200: **Statistics and Agricultural Experimentation**

Instructor: **Prof. Padmanathan**

Prerequisite: **MP 100**

Course covers descriptive statistics; normal frequency distributions; probability; statistical inference; binomial, poisson and chi-square distributions; tests of significance; regression and correlation; sampling; planning of experiments; analysis of variance of simple designs.

Both semesters – 3 lecs per week.

Text – To be announced.

MP 220: **Computer Science**

Instructor: **Prof. Madigan**

Introduction to problem-solving methods, algorithm development and a high level programming language. Emphasis is on designing, coding, debugging, and documenting programs.

Both semesters – 3 lecs and 2 labs per week.

MP 230: **Multivariable Calculus**

Instructor: **Prof. Madigan**

Prerequisites: **MP 100, MP 105**

Covers vectors, differential calculus of several variables, multiple integration.

Fall semester – 4 lecs and 2 labs per week.

MP 235: Differential Equations and Linear Algebra

Instructor: **Prof. Madigan**

Prerequisite: **MP 100, MP 105**

Course covers elementary differential equations, first order equations, types of second order equations and solutions, applications to physical problems, vectors and vector products, differentiation, integration, matrices, linear transformations, eigenvalues.

Winter semester – 4 lecs and 2 labs per week.

MP 300: Electric Circuits

Instructor: **Prof. Smith**

Prerequisite: **MP 135**

Includes theory of circuits and power engineering; DC circuits: AC currents and voltages; phasors and complex algebra; AC circuits: current-voltage; power; frequency response; polyphase circuits; transients; magnetic circuits; si phase transformers; electrical machinery; DC machines; alternators; induction and synchronous motors.

Fall semester – 3 lecs and 2 labs per week.

Text – Johnson, Hilburn, Johnson, *Basic Electric Circuit Analysis*.

MP 320: Statistical Methods

Instructor: **Prof. Madigan**

Prerequisite: **MP 200**

Covers methods of analysis of variance and covariance, experimental designs, sampling techniques, multiple regression and correlation.

Fall semester – 3 lecs and 2 labs per week (first offered 1983-84).

Greenhouses are winter labs in the Plant Science Department, NSAC.



Plant Science

PS 10: **Plant Science Skills**

Instructor: **Prof. Ju**

Techniques and skills used in plot seeding, forage harvesting, corn harvesting, yield and dry matter determinations. Seed testing, seed stratification, bulb forcing, as well as propagation of hardwood and softwood cuttings are undertaken. Course includes studies in the uses and operation of instruments used to monitor plant growth conditions. Automatic watering and feeding of greenhouse crops, various methods of grafting, as well as the preparation of exhibition materials are also studied.

Winter semester – 4 labs per week (2 labs per week in Semester A).

Text – (for propagation portion of subject) Hartmann and Kester, *Plant Propagation*.

PS 30: **Plant Science**

Instructor: **To be announced**

Selected topics on crop plants with emphasis on characteristics that relate to the selection and adjustment of equipment.

Fall semester – 3 lecs and 2 labs per week.

PS 39: **Greenhouse Management**

Instructor: **Prof. Ju**

Prerequisite: **PS 14**

Available only to students who have successfully completed the first year of the Horticulture Minor of the Plant Science Technician Course, the first year of the Landscape Horticulture Technology Course, or subject PS 10. Covers types of greenhouses, heating systems, ventilation, relative humidity and automatic controls, culture of individual vegetable and floral crops, and bedding plants.

Fall semester – 3 lecs and 2 labs per week.

PS 40: **Field Crops I**

Instructor: **Prof. Bubar**

A study of grasses, legumes and other crops grown for forage or grain; factors influencing adaptation and distribution of these crops. Emphasis is placed on crops and conditions in the Atlantic Provinces.

Fall semester – 3 lecs and 2 labs per week.

Text – Martin, Leonard and Stamp, *Principles of Field Crop Production* (3rd edition).

PLANT SCIENCE

PS 41: **Field Crops II**

Instructor: **Prof. Bubar**

Prerequisite: **PS 40**

A continuation of PS 40 dealing with establishment, production management, harvesting and storage of forage and grain crops. The overall objective is to provide a basis for sound feed production decisions on livestock farms in the Atlantic Region.

Winter semester – 3 lecs and 2 labs per week.

Text – Martin, Leonard and Stamp, *Principles of Field Crop Production* (3rd edition).

PS 42: **Cash Crops and Seed Production**

Instructor: **Prof. Bubar**

Prerequisite: **PS 40**

A follow-up to PS 40. It deals with production of field crops for industrial and commercial markets and of pedigreed and non-pedigreed seed production.

Winter semester – 3 lecs and 2 labs per week.

PS 43: **Berry Crops**

Instructor: **Prof. Ju**

Berry crops studied include strawberries, raspberries, cranberries, blueberries, currants and gooseberries. All aspects of berry production, from planting to marketing are covered, as well as tree fruit production, including harvesting. Course also includes visits to orchards and processing plants.

Fall semester – 3 lecs and 2 labs per week.

PS 44: **Tree Fruit Crops**

Instructor: **Prof. Ju**

Prerequisite: **PS 43**

The culture and handling of apples, pears, peaches, plums and cherries. Topics studied are soil management, use of fertilizers, pruning, thinning, harvesting, storage and marketing.

Winter semester – 3 lecs and 2 labs per week.

PS 45: **Turf Production I**

Instructor: **Prof. Daniels**

A study of cool season turfgrasses, their individual characteristics and value. The relationship of the development of a specific turfgrass and its best growing environment and use are studied. Laboratory periods deal with seasonal applied practices in turfgrass production.

Fall semester – 2 lecs and 3 labs per week.

Text – Beard, James, *How to Have a Beautiful Lawn*.

PLANT SCIENCE

PS 46: **Turf Production II**

Instructor: **Prof. Daniels**

Prerequisite: **PS 45**

A study of the applied management of turfgrass. Topics include establishment and renovation of turfgrass, proper fertilizing, watering, and pest control programs. Laboratory periods deal with formation of applied turfgrass care management programs.

Winter semester – 2 lecs and 3 labs per week.

Text – Beard, James, *How to Have a Beautiful Lawn*.

PS 49: **Potato Production**

Instructor: **Prof. Haliburton**

Cultural practices involved in the production of potatoes are discussed in relation to the botanical characteristics of the potato plant. Physiological changes involved in sprouting, tuber initiation, crop development and storage are considered in detail. Seed potato production is given particular attention.

Winter semester – 3 lecs and 2 labs per week.

PS 50: **Landscape Horticulture I**

Instructor: **Prof. Higgins**

Fundamental principles and industry practices for the growth, selection, moving and maintenance of trees, shrubs and ground covers are discussed as well as the functional uses of these ornamental plants for the contemporary landscape.

Fall semester – 3 lecs and 4 labs per week.

Text – Carpenter, Walker, Lanphear, *Plants in the Landscape*.

PS 51: **Residential Landscape Design**

Instructor: **Prof. Higgins**

Prerequisites: **AE 12, PS 50**

Residential landscape design is studied in detail with special emphasis on a systematic approach to creative solutions to design problems. Landscapes of private homes and multiple family complexes are studied.

Winter Semester – 3 lecs and 4 labs per week.

Text – Buckley, *Ornamental Shrubs of Canada*.

PS 52: **Plant Science Project**

Instructors: **Profs. Daniels and Haliburton**

A study of an agronomic or horticultural topic, which usually includes plant growing experimentation that a student pursues in much more detail than is possible in lecture or laboratory course presentations. Students are evaluated on initiative in developing the project, competence in carrying out its practical aspects, and on demonstrated progress towards objectives set when the project is initiated.

Both semesters – Time to be arranged.

PLANT SCIENCE

PS 53: **Vegetable Production**

Instructor: **Prof. Haliburton**

Production practices for vegetables grown in the Atlantic region are studied in detail, including botanical and horticultural characteristics, soil and fertility requirements, cultivar selection, pest management, harvesting and storage. Commercial vegetable enterprises are visited.

Fall semester – 3 lecs and 2 labs per week.

Text – Ware and McCollum, *Producing Vegetable Crops*.

PS 55: **Nursery Crops**

Instructor: **Prof. Higgins**

Covers the production of woody landscape plant materials and herbaceous perennials. More specifically, it covers plant propagation techniques and equipment, nursery culture and equipment, garden center handling and sales of the plants.

Fall semester – 3 lecs and 2 labs per week.

Text – Hartmann and Kester, *Plant Propagation*.

PS 60: **Landscape Plant Material I**

Instructor: **Prof. Higgins**

Landscape plants are studied with respect to their identification, landscape value, hardiness, growth characteristics, diseases and insects and propagation. Plants studied are deciduous trees and shrubs, perennials, and annual bedding plants.

Fall semester – 3 lecs per week.

Text – Dirr, *Manual of Woody Landscape Plants*.

PS 61: **Landscape Plant Materials II**

Instructor: **Prof. Higgins**

Involves the study of narrow leaf and broad leaf evergreens and their identification, landscape value, hardiness, growth characteristics, diseases and insects, and propagation. Identification of woody plants in winter is also covered.

Winter semester – 3 lecs per week.

Text – Dirr, *Manual of Woody Landscape Plants*.

PS 70: **Landscape Techniques**

Instructor: **Prof. Higgins**

A spring course in which students learn techniques in maintenance and development of lawns, flower beds, shrub borders and hedges. Course also involves moving trees and shrubs, pruning and tree surgery. Students participate in implementing landscape projects from prepared plans.

Spring semester – 6 weeks.

PLANT SCIENCE

PS 71: **Arboriculture**

Instructor: **Prof. Higgins**

Special emphasis is placed on advanced arboriculture including environmental and non-parasitic injuries to trees, bracing and cabling, street trees, and evaluation of shade trees. Plant identification is an important segment of this course. Students are required to submit a plant collection.

Fall semester – 3 lecs and 6 labs per week.

Text – Pirone, *Tree Maintenance*.

PS 72: **Landscape Maintenance**

Instructor: **Prof. Higgins**

Prerequisite: **PS 50**

Deals with landscape maintenance. Emphasis is placed on scheduling horticultural work, on horticultural maintenance equipment, and pesticides and their applications. Time studies and organization of horticultural tasks are considered. A calendar of landscape maintenance tasks is developed by the students. Plant identification is an important component of this course.

Winter semester – 3 lecs per week.

PS 73: **Landscape Horticulture II**

Instructor: **Prof. Higgins**

Prerequisite: **PS 50**

The study of herbaceous plants and their uses in the landscape. Other special groups of plants such as vines, roses, and indoor landscaping plants are studied.

Fall semester – 3 lecs and 4 labs per week.

Text – Buckley, *Canadian Garden Perennials*.

PS 74: **Landscape Design & Construction**

Instructor: **Prof. Higgins**

Prerequisites: **PS 50, PS 51 and PS 72**

Advanced landscape design problems and techniques. Topics such as paving materials, site furniture, retaining walls, curbing, roof gardens and planters are covered. A systematic approach to site planning, design, and construction of a design is thoroughly examined.

Winter semester – 3 lecs and 6 labs per week.

Text – Walker, *Site Design and Construction Detailing*.

PLANT SCIENCE

PS 75: **Landscape Horticulture Project**

Instructor: **Prof. Higgins**

Involves the pursuit of a horticultural topic by a student in much greater detail than is possible in regular lecture and laboratory course presentations. The student is evaluated on initiative, presentation techniques, and competence in carrying out the objectives of the project from the time the study is initiated until it is completed. The topic to be studied must be decided before the end of the fall semester.

Winter semester – 4 labs per week.

PS 76: **Plant Products Physiology**

Instructors: **Profs. Prange and Haliburton**

Prerequisite: **B 41 (can be taken concurrently)**

The principles of plant physiology as they apply to plant products in storage environments. Course deals with management practices associated with the harvesting and storage of crops and the effect of time period and conditions of storage on the quality of the plant products. Storage structures are studied and representative types of commercial storages visited.

Winter semester – 3 lecs and 2 labs per week.

PS 100: **Principles of Crop Production**

Instructors: **Profs. Bubar and Daniels**

This is a prerequisite for all Plant Science production subjects. General principles underlying adaptation, improvement, culture and utilization of agronomic and horticultural crop plants. Special attention is paid to crops and discussion of principles in relation to the crops grown in the region.

Fall semester – 3 lecs and 2 labs per week.

Text – Janick, Schery, Woods and Ruttan, *Plant Science, An Introduction to World Crops* (2nd edition).

PS 300: **Forage Crops**

Instructor: **To be announced**

Principal underlying characteristics, tolerances, requirements, uses, production of forage plants for hay, pasture, silage, haylage, soilage or cover.

Winter semester – 3 lecs and 2 labs per week (first offered in 1982-83).

PS 305: **Grain Production**

Instructor: **To be announced**

Study of cereals, pulses, oilseeds, and other grains, their classification, adaptation, distribution, culture, improvement, seed production, handling, grading, and utilization.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

PLANT SCIENCE

PS 310: Vegetable Crops

Instructor: **Prof. Haliburton**

Botanical and horticultural features of major families of vegetable crops. Production technology, pest management, harvesting, and storage requirements of major vegetable crops are studied in detail.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

PS 315: Tree Fruits

Instructor: **To be announced**

Origins, history, biosystematics, adaptation, distribution, and culture of tree fruits. Propagation, pruning, training, harvesting, and storage, pest control, and breeding of new cultivars and marketing of these crops are included in the course.

Winter semester – 3 lecs and 2 labs per week (first offered in 1983-84).

PS 320: Berry Crops

Instructor: **To be announced**

Principles and practices of small fruits production, history, biosystematics, adaptation, distribution, pest control, breeding of new cultivars and propagation, storage and marketing.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

PS 325: Potato Production

Instructor: **To be announced**

History, biosystematics, growth, and development of the crop. Culture through seed preparation, sprouting, growth, tuberization, maturation and storage for seed, table and processing are studied in detail. Fertility practices and pest management, breeding, and use of cultivars, and nutritional qualities of the crops are considered. Production practices in the Atlantic Provinces are examined in detail.

Fall semester – 3 lecs and 2 labs per week.

PS 330: Greenhouse Crop Production and Floriculture

Instructor: **Prof. Daniels**

Construction and equipment of greenhouses and related structures. Physiological principles involved in the growing and correct timing of vegetable and flower crops are studied and related to commercially viable plant production. Plant nutrition, propagation and greenhouse management are also considered.

Winter semester – 3 lecs and 2 labs per week.

PLANT SCIENCE

PS 335: **Landscape Horticulture**

Instructor: **Prof. Higgins**

A survey course of the landscape industry. Aspects covered are plant production in nurseries, landscape design, landscape construction and landscape maintenance.

Fall semester – 2 lecs and 4 labs per week.

PS 340: **Turfgrass Culture and Management**

Instructor: **Prof. Daniels**

Culture and management of turfgrass. Emphasis is on functional, recreational and ornamental use of turf and in solving problems in turfgrass production.

Fall semester – 3 lecs and 2 labs per week (first offered in 1983-84).

PS 345: **Woodlot Production**

Instructor: **To be announced**

Trees and forests of Eastern Canada, forest ecology, product multiple use potentials, silviculture, management and marketing.

Fall semester – 3 lecs and 2 labs (first offered in 1983-84).

PS 400: **Plant Breeding**

Instructor: **To be announced**

Prerequisites: **B 240, MP 200, two crop production subjects**

Improvement of crops through the application of genetic principles to breeding methods. A term report is required.

Fall semester – 3 lecs per week (first offered in 1984-85).

PS 405: **Agronomy**

Instructor: **To be announced**

Available only to students who have completed all the required subjects in the first seven semesters, including two agronomic production subjects. The objective is to review and intergrate material from prerequisite subjects on field crop production, soils, climate and basic sciences into crop management systems. Students successfully completing this course qualify to be identified as agronomists.

Winter semester – 3 lecs per week (first offered in 1984-85).

PLANT SCIENCE

PS 410: **Horticulture**

Instructor: **To be announced**

Available only to students who have completed all the required subjects in the first seven semesters, including two horticultural production subjects. Objective is to review and integrate material from prerequisite courses on horticultural crops production, soil, climate, and basic sciences into crop management systems. Students successfully completing this course qualify to be identified as horticulturalists.

Winter semester – 3 lecs per week (first offered in 1984-85).

PS 415: **Crop Adaptation**

Instructors: **To be announced**

Prerequisites: **Two crop production subjects**

Crops in relation to environmental influences such as temperature, light, soil, water, and biotic factors of where crops are grown. Approaches to expanding areas of adaptation and distribution are considered. A term report is required.

Winter semester – 3 lecs per week (first offered in 1984-85).

PS 420: **Storage Physiology**

Instructor: **To be announced**

Prerequisites: **PS 415, PS 430, PS 435**

Post harvest physiology of fruits and vegetables in relation to storage, handling techniques, and storage life of the product. Respiration, transpiration, maturation, and storage diseases are considered in relation to the condition of the crop being stored and the storage environment.

Winter semester – 3 lecs and 2 labs per week (first offered in 1984-85).

PS 450: **Seminar and Project**

Instructors: **Department Staff**

Directed study of a topic that may involve original research and require both an oral and a written presentation in semester 7 or 8. All students registered in Plant Science in semesters 3 to 8 are expected to attend oral presentations. Topic for directed study is selected in the penultimate year. Students are encouraged to work on their topic during the summer before final year.

Both semesters – 1 lec per week (first offered in 1984-85).

Welding – Part of Shopwork at NSAC.



Vocational Courses

The Nova Scotia Agricultural College offers pre-employment and upgrading courses for several specific farm and farm-related careers. These may be of varying lengths and offered at different times of the year depending upon the topic(s) being studied. All vocational courses lead to vocational certificates.

The following courses are tentatively planned for the 1982-83 year.

Accounting & Taxation (Farm)
Artificial Insemination
Beekeeping
Blueberry Production
Christmas Tree Production (Basic)
Dairy Herd Operation
Draft Horses In Basic Woodlot Operations
Draft Horses (Introduction to)
Draft Horses (Use of) In Commercial Forest Operations
Farm Skills I
Farm Skills II
Farrier (Basic)
Farrier (Advanced)
Floral Design I
Floral Design II
Fox Production
Goat Husbandry
Hoof Trimming
Horse Care Program
Ironwork (Basic)
Ironwork (Advanced)
Meat Cutting
Mink Production
On-Farm Computers
Pesticides – Crop Protection, Application & Safety
Preventative Maintenance & Repair of Farm Machinery
Sheep Husbandry (Basic)
Strawberry Production
Swine Farm Management
Swine Herd Operation
Tree Fruit Production
Turf Production
Vegetable Production
Welding (Basic Farm)
Woodlot Management (Farm) & Chain Saw Safety

Entrance Requirements

These are specific for each course. In most cases, a candidate for admission must:

- be at least seventeen years of age
- demonstrate interest in the occupation being studied
- have an opportunity of using information gained on the course in employment and/or be presently employed (or have experience) in work related to the course.

Cost

Room and board at the Nova Scotia Agricultural College is \$59 per week. The cost for books, student fees, and other similar charges depends upon the length of the course and the topics being covered. Rarely do such costs exceed \$10.

Living Allowances

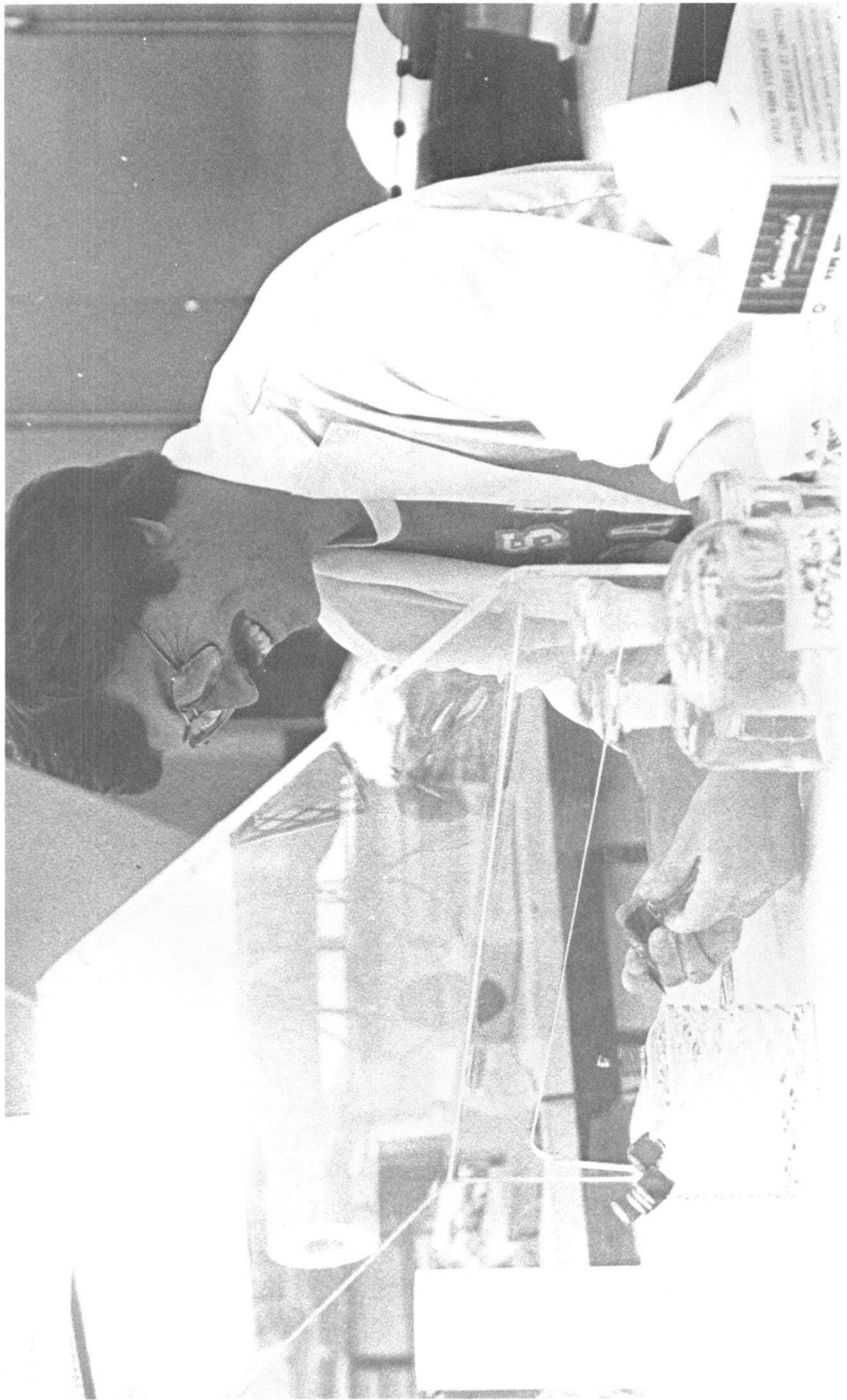
Some adults on the long courses qualify for living assistance from Employment and Immigration Canada. The amount of the assistance is determined by the department according to the student's financial responsibilities.

Applications

Persons interested in any of the vocational courses should write a letter of application to the Co-ordinator of Vocational Courses, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3.

Continuing Education

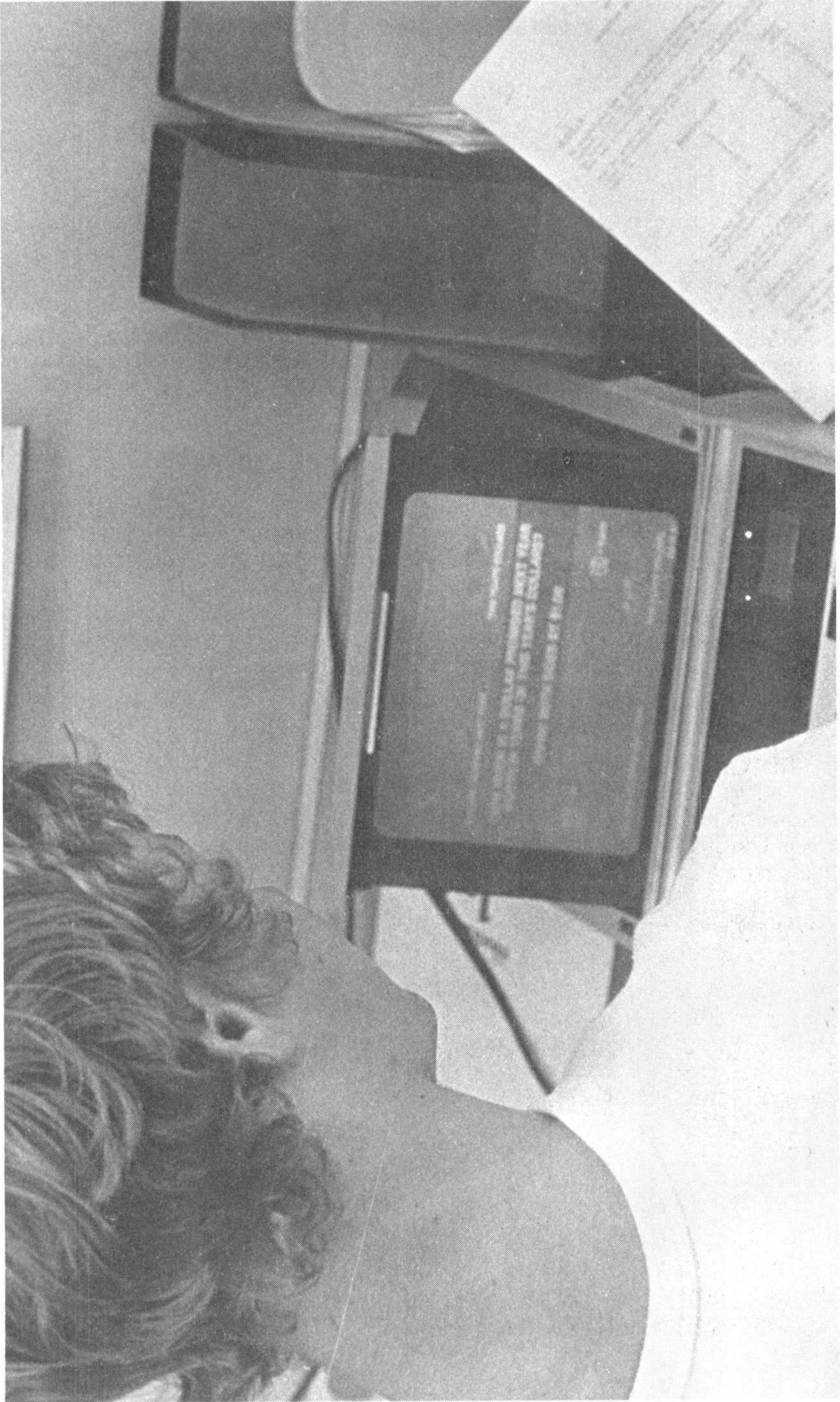
The NSAC offers evening courses, summer schools, and block programs from time to time for special interest groups within the agriculture and related industries. For information on courses offered and costs, write Chairman, Continuing Education, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3.



Microbiology in Agriculture at NSAC.



Practical demonstration – NSAC swine herd.



New ways to study at NSAC.

Scholarships and Bursaries

Entrance Scholarships

Nova Scotia Institute of Agrologists Scholarship

The Nova Scotia Institute of Agrologists has provided a scholarship of \$500 for a resident of Nova Scotia entering the Degree course at the Nova Scotia Agricultural College. In awarding this scholarship, the selection committee will take into consideration academic standing and financial need. Applicants should write the Registrar, Nova Scotia Institute of Agrologists, NSAC, Truro, N.S. for an application form, which will be available by July 1. The application and the applicant's Grade XII certificate should be in the Registrar's office not later than August 15.

Provincial Scholarships: Nova Scotia and New Brunswick

The Provinces of Nova Scotia and New Brunswick offer scholarships to their residents, who have good marks and are entering the Degree courses at the Nova Scotia Agricultural College. Scholarships are awarded on the basis of the matriculation year. In the case of students with high marks, a scholarship may be offered on the basis of mid-year and Easter marks. No application is necessary.

The Provinces of Nova Scotia and New Brunswick offer scholarships of \$200 to their residents entering one of the Technical Courses at the Nova Scotia Agricultural College with an average of 80% or better. No application is necessary.

Provincial Scholarships: Prince Edward Island

The Province of Prince Edward Island offers scholarships to all residents admitted to the Degree courses at the Nova Scotia Agricultural College. For information and application forms contact: Rural Development Section – Training, Prince Edward Island Department of Agriculture & Forestry, P.O. Box 2000, Charlottetown, P.E.I. C1A 7N8.

Newfoundland Provincial Scholarships

The Newfoundland Government, through its Department of Education, offers three scholarships of \$700 each to Newfoundland students who enter the first year of the B.Sc. (Agr.) or B.E. (Agr.) courses at NSAC with the highest averages in the subjects required for admission. If there are insufficient students admitted to the first year of the course, the remaining scholarship(s) are offered to a student (or students) entering second and, if necessary, subsequent years with the highest average (averages). No application is required. The scholarships are presented at Autumn Assembly.

I.O.D.E. Bursaries

I.O.D.E. Bursaries of \$100.00 to \$300.00 are awarded to entering students who show academic ability and financial need. For details, contact the Provincial Education Secretary, Provincial Chapter I.O.D.E., Room 505, The Roy Building, 1657 Barrington St., Halifax, N.S. B3J 2A1. Applications open March 1 and close May 1, 1982.

Nova Scotia Agricultural College Alumni Scholarships

The Nova Scotia Agricultural College Alumni Association offers two scholarships of \$500 to worthy students entering the first year of the Degree or Technician Course. Academic standing and financial need are taken into consideration in awarding the scholarships. No application is necessary.

Henry Austin Memorial 4-H Scholarship

In memory of Henry Austin, a devoted friend to everyone and a dedicated leader who faithfully served the County of Cumberland for more than seven years as Agricultural Representative, a memorial fund has been established by his friends. This fund provides an annual scholarship to a deserving 4-H Club member from Cumberland County attending first year in either a Technician or Degree Course at the Nova Scotia Agricultural College, or a Home Economics Course, at the college of his or her choice.

The Scholarship Committee of the Cumberland County Federation of Agriculture administers the fund and selects the recipient.

The value of the scholarship is \$100, payable in two parts: \$50 on successful completion of the first term and the balance on completion of the year's course.

Applicants must possess a Grade XI High School Certificate, have completed at least two years in 4-H Club work in Cumberland County, and be recommended by the District Federation of Agriculture. Candidates are selected according to their leadership ability, interest in community activities, scholastic standing and financial need.

Applications must be submitted to the Secretary of the County Federation of Agriculture, not later than August 31. Application forms may be obtained from the Secretary of the District Federation of Agriculture in the candidate's area, or from the Agricultural Office, Amherst.

Leonard Best Memorial Scholarship

The Nova Scotia 4-H Alumni Association presents a \$50 scholarship in memory of Leonard Greenwood Best. This scholarship is awarded annually to the most outstanding 4-H Club member in Nova Scotia. The selection is made at the Provincial 4-H Leadership Week in Truro and is based on personality, leadership qualities, contribution to 4-H, and all-round ability. This scholarship is to be used toward further education in any field (not applied for).

Canadian National Exhibition Scholarship for 4-H Club Members

Each year, the Canadian National Exhibition awards in each province, a scholarship of the value of \$1000 and an all-expense paid trip to the Canadian National Exhibition to a candidate who is currently in, or who has completed, the first year of a degree course in Home Economics, a degree course in Agriculture, or a degree course in Veterinary Medicine.

Candidates must be at least 17 years of age, have completed at least two years in 4-H Club work, and have shown qualities of leadership and an interest in community activities. The successful candidate will receive his or her award at a ceremony at the Canadian National Exhibition in the year in which it is won. The successful candidate has five years in which to use his or her scholarship. Application forms may be obtained from the Agricultural Representative.

Co-Op Atlantic Bursaries

Co-op Atlantic offers three bursaries of \$200 each to students entering the Technician Course. Selection is based on the recommendation of a local co-operative or district Federation of Agriculture, need, and potential for community leadership and/or co-operative endeavour. Applications should be sent to Co-op Atlantic, Box 750, Moncton, N.B., no later than August 15.

The Lorne S. Fisher Memorial Scholarship

The Cumberland County Federation of Agriculture has set up a scholarship of \$100, in memory of the late Lorne S. Fisher, a leader and a good friend of farm organizations in his community, his county and his province, and a member of the Federation of Agriculture. It is open to a candidate who is a son or daughter of a Federation member and who is enrolled in a Technician Course at this institution. The scholarship will be payable in two parts: \$50 on completion of the first year and \$50 on completion of the second year.

Applications must be approved by the District Federation of Agriculture and must be submitted to the Secretary of the Cumberland Federation of Agriculture by August 31. Application forms may be obtained from the Secretary of the District Federation of Agriculture in the candidate's area.

The Benny Duivenvoorden Memorial Scholarship

The Benny Duivenvoorden Memorial Scholarship of \$500 is offered by the New Brunswick Central Artificial Breeding Co-operative to a New Brunswick 4-H member who enters a recognized college of agriculture. Applications must be made to the N.B. Central A.B. Co-op, Box 1567, Fredericton, N.B. The deadline for applications to be at the above address is August 31.

Continuation Scholarships At the Nova Scotia Agricultural College

The Nova Scotia Federation of Agriculture Scholarship

The Nova Scotia Federation of Agriculture offers two scholarships of \$300 each to residents of Nova Scotia. One is awarded to a student who has completed the work of the first year of the Degree Course and is entering the second year; the other is awarded to a student who has completed the work of the first year of the Technician Course and is entering the second year of that program. Financial need and academic standing are considered in making the award. No application is necessary.

The David W. Brown Bursary

The A.C.A. Co-operative Association Ltd. offers two bursaries of \$500 each: one to a worthy student in the second year of the Degree Program and one to a worthy student in the second year of the Technician Program. The bursaries are awarded on the basis of scholastic achievement, need, interest in farming and in the poultry industry in particular. Applications for the bursaries must be made by May 1. Application forms are available from the Registrar's Office.

Gulf Canada Limited Scholarship

Gulf Canada Limited offers a scholarship of \$150 to a worthy student in the second year of the Degree Course. Academic standing and financial need are taken into consideration. No application is necessary.

Ira L. Rhodenizer Memorial Scholarship

The Nova Scotia Federation of Agriculture offers a scholarship of \$300 to a student in the Second Year Technician Class or the Second Year Degree Class as a memorial to the late Ira L. Rhodenizer, long-time friend of organized agriculture and the 4-H movement. The recipient must be a Nova Scotian of high academic standing who has taken an active part in student affairs and has been active in the 4-H movement. The scholarship is payable after the winner has registered for second year. A letter of application indicating 4-H experience must be received at the Registrar's Office, NSAC, not later than September 20.

The Dr. Kenneth Cox Scholarship

As a tribute to their retiring Principal, the Class of 1964 of the Nova Scotia Agricultural College established a fund of \$2000. The interest on this fund is awarded annually to a worthy student entering the final year in agriculture. No application is necessary.

Provincial Scholarships: Nova Scotia and New Brunswick

The Provinces of Nova Scotia and New Brunswick offer scholarships to their residents registered in the second year of the Degree Course at the Nova Scotia Agricultural College who have attained a high standard in the work of the previous year. No application is necessary.

Provincial Scholarships: Prince Edward Island

The Province of Prince Edward Island offers scholarships to all residents registered in the second year of Degree Courses at the Nova Scotia Agricultural College. For information and application forms contact: Rural Development Section – Training, Prince Edward Island Department of Agriculture and Forestry, P.O. Box 2000, Charlottetown, P.E.I. C1A 7N8.

A.W. MacKenzie Scholarship

A scholarship of \$150 is offered by A.W. MacKenzie for a student entering the second year of the Degree Course. The scholarship is awarded on the basis of scholastic standing, need and participation in 4-H Club activities. A letter of application indicating 4-H experience must be received at the Registrar's Office, NSAC, not later than September 20.

Atlantic Provinces Hatchery Federation Scholarship (Technical)

The Atlantic Provinces Hatchery Federation offers a scholarship of \$200 to a resident of the Atlantic Provinces admitted to the final year of a Technical Program who has a specific interest in poultry.

The Farm Focus Bursary

The Farm Focus newspaper offers a bursary of \$200 to a worthy student entering the second year of the Degree or Technician Course. Academic standing and financial need are taken into consideration in awarding this bursary. No application is necessary.

New Brunswick Poultry Council Scholarship

The New Brunswick Poultry Council offers a scholarship of \$300 to a student in the final year of the Technical Program. Eligible candidates must be in a program of study that includes specialized training in poultry production. Preference will be given to residents of New Brunswick. Selection of the candidates is based on academic standing, interest and involvement in poultry production, and leadership in student and community affairs.

Donald E. Clark Memorial Scholarship

In memory of the late Professor and Head of the Agricultural Engineering Department, Donald E. Clark, a scholarship (s) is (are) offered to final year students in the Agricultural Engineering Department, awarded on the recommendation of the Agricultural Engineering Department Staff.

The value of the scholarship (s) is determined by the number offered and the interest from a fund established by friends and associates in teaching and industry of the late Donald E. Clark. The awarding of the scholarship (s) is based on academic standing, interest and aptitude in the engineering field. No application is necessary.

The Wilfred Cyr Memorial Scholarship

The New Brunswick Sheep Breeders Association, in memory of the late Wilfred Cyr, offers two scholarships of \$100 each (one to an Anglophone and one to a Francophone) to students who have completed the first year of a degree or technical course at the Nova Scotia Agricultural College and who enter the second year of the program. Application forms can be obtained from the office of the N.B. Sheep Breeders Association or from the Registrar's Office, NSAC.

The Dr. Robert C. Rix Family Farm Bursary

This bursary of \$200 is offered annually to a student who enters the final year of the Farming Technology course. It is awarded on the recommendation of the Economics and Business Department staff. The selection of the recipient is to be based on determination and dedication to the objective of operating a family farm, the extent to which the student is hard-working and conscientious, and financial need. The bursary is presented at the Fall Assembly. No application is required.

Scholarships for Third and Fourth Year Students

Canada Packers Scholarship

Canada Packers Inc. offers an annual scholarship valued at \$1,000 to a student who completes the third year in the Animal Science option of the B.Sc.(Agr.) course and has registered for the final year. The student may also be offered an internship with the Company for the summer period between the third and fourth academic year. Candidates are considered on the basis of academic standing, leadership qualities and participation in student and community affairs. Selection of the recipient is made following the fifth semester (first term of the third academic year) of the student's program by Company representatives on the recommendation of the NSAC Scholarships Committee. The presentation of the scholarship takes place at Autumn Assembly in the final year of the students program. Application forms are available at the Registrar's Office, NSAC.

Women's Institutes Scholarship

The Women's Institutes of Nova Scotia offer a \$500 scholarship to a student who enters the third year of the program leading to a B.Sc.(Agr.) degree. Selection of the recipient is by the Scholarship Committee of the W.I.N.S. on recommendation of the NSAC Scholarships Committee. First priority is given to academic standing. Consideration is also given to leadership and participation in student and community affairs, and financial need. The scholarship is presented at Autumn Assembly.

Applications are available at the W.I.N.S. or Registrar's Office at NSAC. The application must be accompanied by an up-to-date transcript of marks and a letter outlining the applicant's career plans. Applications with enclosures must be received at the office of the W.I.N.S., Cumming Hall, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3 by May 31.

The Ernest L. Eaton Scholarships

Two scholarships of \$500 each, one for a male and one for a female, are offered to students with the highest average in the work of the second year B.Sc.(Agr.) program. Candidates must be enrolled in the third year of the course. The scholarships are presented at Autumn Assembly. No application is required.

Canadian Feed Industry Association (Atlantic Division) Scholarship

The Atlantic Division of the Canadian Feed Industry Association offers a \$400 scholarship to a student who has successfully completed the second year of the B.Sc.(Agr.) program and who has enrolled in the third year. Academic standing and leadership in student and community affairs are important considerations in selecting the recipient. No application is necessary.

New Brunswick Poultry Council Scholarship

The New Brunswick Poultry Council offers a scholarship of \$300 to a student in the final year of the B.Sc.(Agr.) program. Eligible candidates must be in a program of study that includes specialized training in poultry production. Preference is given to residents of New Brunswick. Selection of the candidates is based on academic standing, interest and involvement in poultry production, and leadership in student and community affairs.

Atlantic Provinces Hatchery Federation Scholarship

The Atlantic Provinces Hatchery Federation offers a scholarship of \$300 to a resident of the Atlantic Provinces admitted to the third or fourth year of the B.Sc.(Agr.) program and enrolled in subjects that make poultry a major area of study.

Scholarships Available at Macdonald College

Two Eliza M. Jones Entrance Scholarships, valued at \$700 each, for one year, are awarded to two students who obtain high standing in the graduating year at the Nova Scotia Agricultural College and who subsequently enroll in the Faculty of Agriculture. These scholarships are made available in September when the students register at Macdonald College.

University of Maine Scholarship

Under an agreement between the University of Maine at Orono and the Nova Scotia Agricultural College, up to five graduates each year from the two-year Degree Course in Agricultural Science who are residents of the Maritime Provinces and are recommended by the Vice-Principal may enter the penultimate year at Maine and pay the same tuition as the residents of Maine. The tuition is a variable figure, but the arrangement represents a saving of about \$1,000 per year.

Cobequid Dog Club Scholarship

The Cobequid Dog Club offers a scholarship of \$200 to a student of the Nova Scotia Agricultural College who is admitted to a veterinary college. Preference in the awarding of this scholarship is given to a resident of Nova Scotia. Selection of the recipient is made by the scholarship Committee, NSAC. No application is necessary.

Dr. J.G. Taggart Scholarship

The Ontario Agricultural College offers a scholarship of \$250 in memory of Dr. J.G. Taggart, former Deputy Minister of the Canada Department of Agriculture. The scholarship is awarded annually to the outstanding graduate of the Nova Scotia Agricultural College who enters the fifth semester of the B.Sc.(Agr.) Degree Program. Apply to the Assistant Registrar, University of Guelph, before April 1.

Co-op Atlantic Scholarship

Co-op Atlantic offers a scholarship of \$300 to a graduate of the Nova Scotia Agricultural College from the Maritime Provinces who is entering the final two years at an approved agricultural college. The scholarship is awarded on the following basis and may be tenable for two years: scholastic ability, financial need, knowledge and appreciation of co-operatives. Application forms may be obtained from the Registrar of the Nova Scotia Agricultural College. Applications must be submitted to the Registrar by April 1.

Medals and Prizes

Governor-General's Medal

A silver medal was first offered for annual competition by His Excellency the Governor-General of Canada in 1914. It is awarded each year by the members of the faculty to the student of the graduating class who has attained the highest standing during his or her college course. In determining "highest standing," scholarship and leadership in student activities, in that order, are the deciding factors.

The H.J. Fraser Memorial Prize for English

In memory of the late Professor H.J. Fraser, a prize is awarded each autumn, on the recommendation of the English Department, to a second-year student who has achieved excellence in a first-year English Course at this institution.

The R.H. Stevenson Memorial Prize for Mathematics and Physics

In memory of the late Professor R.H. Stevenson, a prize is awarded each autumn, on the recommendation of the Mathematics and Physics Department, to a second year student who has achieved excellence in first year Mathematics and Physics at this institution.

Masterfeeds Award

Maple Leaf Mills Limited provides two prizes of \$50: one for the Feeds and Feeding Course and one for the Animal Nutrition Course.

Nova Scotia Veterinary Medical Association Prize

The Nova Scotia Veterinary Medical Association provides a prize of \$200 to a deserving student who excels in the Animal Physiology and Animal Health courses offered to Technical students (Animal Science) and who subsequently enrolls in suitable courses of the Technology year.

Ketchum Manufacturing Company Limited Prize

The Ketchum Manufacturing Company Limited has provided \$2000 in Dominion of Canada Bonds, the interest on which is used for an annual prize available to a Nova Scotia Agricultural College graduate registered in the Animal Science option. The prize is awarded to a worthy student with a satisfactory academic standing. Application for this prize must be made to the Registrar before April 15 of the applicant's last year at the Nova Scotia Agricultural College.

The Lorne C. Callbeck Prize

A prize of \$50 is awarded each autumn by the late Mr. Lorne C. Callbeck to a second year degree student who excelled in the Plant Science course in his or her first year.

The G.G. Smeltzer Award

An award is presented annually by King Grain Ltd. in recognition of contributions made to agriculture by Mr. G.G. Smeltzer. This award is presented to a student registered in a second year of study at NSAC who excels in the work of the first year Plant Science Technician Course.

K. Degeus Memorial Prize for Plant Science

In memory of the late K. Degeus, a prize is awarded annually at graduation on the recommendation of the Plant Science Department to a student who has completed a technical course at NSAC. The award is based on high standing in course work and preference is to be given to students in the horticultural field. No application is necessary.

Engineering Technician Award

The Society for Engineering Technicians and Technologists of Nova Scotia awards a prize of \$50 on the recommendation of the Agricultural Engineering Department, to a graduating student in the Agricultural Engineering Technician Course for outstanding achievements. No application is necessary.



Agricultural Engineering Laboratory

NSAC Enrollment 1981-82

Courses Leading to B.Sc.(Agr.) or Pre-Vet

First Year – Class of '85

Paul Acker, 48 Canary Crescent, Halifax, N.S. B3M 1R1
Carole Ahier, Box 1041, Campbellton, N.B. E3N 3H4
Andrew Alkema, R.R. No. 1, Debert, N.S. B0M 1G0
Bernice Allison, 108 Poulsen Avenue, Apt. 11, Newcastle, N.B. E1V 2P5
Jean Babineau, 81 Garfield Street, Moncton, N.B. E1A 3Z2
Ian Baird, Box 4204, St. John's, Nfld. A1C 5Z7
Ronda Bellefontaine, R.R. No. 2, Middle Musquodoboit, N.S. B0N 1X0
Catherine Bennie, 28 Charlotte Drive, Charlottetown, P.E.I. C1A 2N5
N. Dwayne Biggar, Kensington, P.E.I. C0B 1M0
Larry Blackwood, 15 Nightingale Road, St. John's, Nfld. A1E 2G4
Margret Brink, Tantallon, R.R. No. 1, N.S. B0J 3J0
Allan Brown, Southampton, R.R. No. 1, N.S. B0M 1W0
Kelly Burke, 173 Dominion Street, Truro, N.S. B2N 3P7
Alexander Cameron, Box 1424, Antigonish, N.S. B2G 2L7
Sean Carson, R.R. No. 1, Sydney Forks, N.S. B0A 1W0
Jeffrey Carter, Staples Brook Road, Debert, N.S. B0M 1G0
L. Pauline Chapman, R.R. No. 1, Nevers Road, Fredericton, N.B. E3B 4X2
Beth-Helene Clark, 7172 Royal Pine Avenue, Halifax, N.S. B3L 2G4
Blair Clark, Cavendish, R.R. No. 1, P.E.I. C0A 1N0
Barbara Coleman, 56 Johnstone Avenue, Dartmouth, N.S. B2Y 2K5
Sandra Coleman, Box 873, Greenwood, N.S. B0P 1N0
Ronald Coles, Suffolk, Charlottetown, R.R. No. 3, P.E.I. C1A 7J7
Jeffrey Colwell, 5 Meadow Drive, Renforth, St. John, N.B. E2H 1K9
Carmen Comeau, Box 195, Weymouth, N.S. B0W 3T0
Karen Coulter, 270 Thibodeau Street, Dieppe, N.B. E1A 1W2
Gregg Cunningham, 72 Guysborough Avenue, Dartmouth, N.S. B2W 1S7
Yvonne Dawe, Box 125, Kelligrews, Conception Bay, Nfld. A0A 2T0
Marcel Dawson, 372 Harold Street, Dieppe, N.B. E1A 1Z1
Sylvia DeChamp, R.R. No. 2, Glen Drive, St. Eleanors, P.E.I. C1N 4J8
Kelly Degen, 79 Kelly Drive, Dartmouth, N.S. B2W 1N8
James Donnelly, R.R. No. 1, Prince William, N.B. E0H 1S0
Paul Donovan, 84 Church Avenue, Sussex, N.B. E0E 1P0
Barbara Duncan, Box 1432, Stellarton, N.S. B0K 1S0
John Earle, Jr., 59 Bennett Drive, Gander, Nfld. A1V 1N1
Margaret Ells, R.R. No. 5, Canning, N.S. B0P 1H0
Lee Ann Forbes, 5 Robert Drive, Box 2010, Dartmouth, N.S. B2W 3X8
David Forsyth, R.R. No. 2, Centreville, N.S. B0P 1J0
June Fulton, R.R. No. 1, Bass River, N.S. B0M 1B0
Theresa Gardiner, 67 Lake Road, Glace Bay, N.S. B1A 2H2
David Harvey, Glassville, R.R. No. 2, N.B. E0J 1L0
J. Michael Hughes, R.R. No. 1, Blockhouse, N.S. B0I 1C0
D. Denise Hurley, 14 John Cross Drive, Dartmouth, N.S. B2W 1X3
Richard Jebbink, Box 151, Newcastle, N.B. E1V 3M3
James Johnson, Box 283, Sydney, N.S. B1P 6H1
Gregory Jones, 22 Pauline Crescent, Dartmouth, N.S. B2W 2A6
Irene Joostema, R.R. No. 6, Kensington, P.E.I. C0B 1M0

H. Elan Kaye, Site 29, Box 10, R.R. No. 1, Bathurst, N.B. E2A 3Y5
Andrew Kelly, Mount Stewart, R.R. No. 3, P.E.I. C0A 1T0
Richard Kennedy, Box 25, Site 4, R.R. No. 3, Charlottetown, P.E.I. C1A 7J6
Paula-Marie Kingston, R.R. No. 2, Box 764, Newcastle, N.B. E1V 3L9
David Kingwell, 1095 Wellington Street, Halifax, N.S. B3H 3A1
Marshall Klevatorick, Box 26, Corner Brook, Nfld. A2H 6C3
Ann Langille, 56 Elm Street, Box 313, Springhill, N.S. B0M 1X0
Paul Leslie, Souris Line Road, R.R. No. 3, Souris, P.E.I. C0A 2B0
Margot Lownds, 12 Ross Street, Halifax, N.S. B3M 2A5
J. Ronald MacDonald, Box 1481, Antigonish, N.S. B2G 2L7
Rhonda MacDonald, 1181 Beaufort Avenue, Halifax, N.S. B3H 3Y3
Alexander MacQuarrie, Cornwall, R.R. No. 2, P.E.I. C0A 1H0
D. Blaine MacQuarrie, Box 745, Port Hawkesbury, N.S. B0E 2V0
Kenneth Malone, Souris Line Road, R.R. No. 3, Souris, P.E.I. C0A 2B0
Ronald Martin, 253 Edward Road, Charlottetown, P.E.I. C1A 5T1
Kevin McCully, Great Village, N.S. B0M 1L0
Janice McKenzie, R.R. No. 2, Truro, N.S. B2N 5B1
Morven McLean, 30 Woodward Crescent, Halifax, N.S. B3M 1J7
Wayne Miller, 740 Beaconsfield Avenue, Saint John West, N.B. E2M 2K7
Marion Moeller, R.R. No. 1, Sussex, N.B. E0E 1P0
Anne Osher, Box 550, Truro, N.S. B2N 5E3
Fern Patterson, R.R. No. 1, Walton, N.S. B0N 2R0
Heidi Patterson, 321 McAllister Avenue, Riverview, N.B. E1B 1T9
Daniel Phinney, Bridgetown, R.R. No. 4, N.S. B0S 1C0
Harlene Pick, Upper Rawdon, R.R. No. 1, N.S. B0N 2N0
Gerard Pickard, R.R. No. 3, Bath, N.B. E0J 1E0
Laurene Power, Charlottetown, R.R. No. 5, P.E.I. C1A 7J8
Joel Ritcey, R.R. No. 5, Fredericton, N.B. E3B 4X6
Martha Robinson, 79 Chesterfield Avenue, Westmount, P.Q. H3Y 2M6
Kirk Saint, Comp. 18, R.R. No. 1, Barrett Subdivision, Lower Sackville, N.S.
 B4C 2S6
David Scammell, 135 Elizabeth Avenue, St. John's, Nfld. A1B 1S2
Michael Schaad, R.R. No. 1, Tatamagouche, N.S. B0K 1V0
Peter Smith, 37 Pine Drive, Sherwood, P.E.I. C1A 6R6
Constance Starratt, 30 Windale Drive, Truro, N.S. B2N 2X5
Christina Stephenson, 125 MacRae Avenue, Sydney River, N.S. B1S 1M1
Darlene Stevenson, Box 1155, Middleton, N.S. B0S 1P0
Peter Swetnam, R.R. No. 2, Centreville, N.S. B0P 1J0
Bruce Thomson, R.R. No. 5, West River, Antigonish, N.S. B2G 2L3
Margareta van de Riet, R.R. No. 1, Shubenacadie, N.S. B0N 2H0
Francis Vosman, R.R. No. 3, St. Andrew's, N.S. B0H 1X0
Brent Wallace, 103 Bird Avenue, Fredericton, N.B. E3A 2H8
Michael Walsh, Georgetown, R.R. No. 1, P.E.I. C0A 1L0
Osbourne Ward, R.R. No. 2, Centreville, N.S. B0P 1J0
Elizabeth Wardrop, 121 Berkley Avenue, St. Lambert, P.Q. J4P 3C9
Christine Wells, Box 10, R.R. No. 4, Upper Sackville, N.S. B4C 3B1
John Whalen, Vernon P.O., R.R. No. 1, P.E.I. C0A 2E0
Donna Wilkins, Middleton, R.R. No. 3, N.S. B0S 1P0
Charlotte Wilson, R.R. No. 1, Stanley, N.B. E0H 1T0
Heather Wilson, 6 Beechwood Terrace, Halifax, N.S. B3M 2C2
Anne Winkelman, Box 95, Bridgewater, N.S. B4V 2W8
Helen Wobeking, R.R. No. 3, Harvey Station, N.B. E0H 1H0

Second Year – Class of '82

Esben Arnfast, West River Station, Pictou Co., N.S. B0K 1Z0
Linda Atkinson, 283 Uplands Ave., Newcastle, N.B. E1V 3P3
Steven Backman, 33 Rosedale Avenue, Halifax, N.S. B3N 2J2
Carol Boyd, Bath, R.R. No. 1, N.B. E0J 1E0
Jill Canam, Box 569, Pictou, N.S. B0K 1H0
Donald Christie, 7 Ross Street, Truro, N.S. B2N 4C9
F. Alexander Crouse, Box 42, Port Williams, N.S. B0P 1T0
Timothy Delaney, 7 Walters Street, Dartmouth, N.S. B2W 1S9
Ruth DeMone, Charlottetown, R.R. No. 1, P.E.I. C1A 7J6
Karen Donovan, 116 Poole Street, Woodstock, N.B. E0J 2B0
Diane Dunlop, 14 Archibald Street, Truro, N.S. B2N 4R4
C. Angus Ells, R.R. No. 5, Canning, N.S. B0P 1H0
Kelly Ferguson, 1027 Mollins Drive, St. John, N.B. E2M 4M1
M. Eileen Floyd, P.O. Box 1773, Antigonish, N.S. B2G 2M5
Joyce Fredericks, 36 Grant Street, Halifax, N.S. B2W 1C3
Lorraine Gaudet, Weymouth, N.S. B0W 3T0
Wendy Gibbs, 35 Westwood Drive, Truro, N.S. B2N 3R4
Daniel Gilfoy, R.R. No. 7, Williams' Point, Antigonish, N.S. B2G 2L4
Katherine Gowan, 169 Union Street, St. Stephen, N.B. E3L 1W2
Pamela Grace, 414 Old Sackville Road, Lower Sackville, N.S. B4C 2J9
Donna Hansen, 6 Shaw Avenue, Yarmouth, N.S. B5A 2T9
Ann Hartlin, R.R. No. 4, Middle Musquodoboit, N.S. B0N 1X0
Monica Haydon, 28 Weyburn Road, Dartmouth, N.S. B2W 1R6
Colleen Home, Burtt's Corner, N.B. E0H 1B0
Stacey Hope, 27 Holiday Drive, Saint John, N.B. E2H 1E3
Shelley Hustins, P.O. Box 100, Bedford, N.S. B4A 2X1
Chantal Johanns, P.O. Box 54, Paquetville, N.B. E0B 2B0
Kirby Judge, 43 Prince Street, Yarmouth, N.S. B5A 1S4
John Lohr, R.R. No. 1, Canning, N.S. B0P 1H0
G. Reid MacDiarmid, 614 Montgomery Avenue, Riverview, N.B. E1B 2A3
Gerald MacDonald, R.R. No. 1 Antigonish, N.S. B2G 2K8
Mary MacDonald, Souris Line Road, R.R. No. 3, Box 11, P.E.I. C0A 2B0
Ronald MacDonald, P.O. Box 40, Bras d'Or, N.S. B0C 1B0
Allan MacDougall, 20 Queen Square, Saint John, N.B. E2L 1R7
Allison MacKinnon, Ellerslie, P.E.I. C0B 1J0
Alan Manning, 171 Queen Elizabeth Drive, Charlottetown, P.E.I. C1A 3B1
Louise Mason, 83 Ross Terrace, R.R. No. 8, Fredericton, N.B. E3B 5W5
Tami Matheson, R.R. No. 1, Pomeroy Ridge, N.B. E3L 2X8
Kevin McCarville, Borden, R.R. No. 1, P.E.I. C0B 1X0
Kimberley McGinnis, 108 Desbrisay Drive, Bridgewater, N.S. B4V 3E5
Charles McIntosh, R.R. No. 1 Bath, N.B. E0J 1E0
Troye McPherson, 816 Prince Street, Sydney, N.S. B1P 5N7
Ricky Milton, Moncton, R.R. No. 2, N.B. E1C 8J6
Susannah Morton, R.R. No. 2, Rexton, N.B. E0A 2L0
Randall Murphy, R.R. No. 1, Scotch Village, N.S. B0N 2G0
Leonard North, Box 261, Canning, N.S. B0P 1H0
Iain Orr, R.R. No. 1, Port Howe, N.S. B0K 1K0
Dana Patterson, R.R. No. 1, Wolfville, N.S. B0P 1X0
Donald Pickard, Bath, R.R. No. 3, N.B. E0J 1E0
Melinda Poile, R.R. No. 2, Westfield, N.B. E0G 3J0

Charles Porrier, Jr., R.R. No. 1, Box 132, Granville, New York 12832
Scott Putnam, R.R. No. 1, Debert, N.S. B0M 1G0
John Riordon, R.R. No. 1, Box 1380, Bathurst, N.B. E2A 3Y5
Brian Robinson, 44 Birch Street, Halifax, N.S. B3N 2V1
Suzanne Rowan, 14 Skyvue Terrace, Dartmouth, N.S. B2W 3Z3
Heather Rushton, R.R. No. 2, Annapolis Royal, N.S. B0S 1A0
Brenda Ryan, Box 138, R.R. No. 1, Marine Drive, Torbay, Nfld. A0A 3Z0
Susan Scales, 16 Crestwood Drive, Charlottetown, P.E.I. C1A 3H3
Shari Schurman, Summerside, R.R. No. 3, P.E.I. C1N 4J9
Barry Seaman, 197 Reade Street, Moncton, N.B. E1C 6S7
Lisa Sioen, R.R. No. 3, Belfast P.O., P.E.I. C0A 1A0
Janice Slater, Debec, R.R. No. 5, N.B. E0J 1J0
Cathy Sparks, 7 Patterson Street, Dartmouth, N.S. B2W 2V9
Lionel Stevens, 1841 Walnut Street, Halifax, N.S. B3H 3S8
Ann Thorne, Sussex Corner, N.B. E0E 1R0
Karen Van Buskirk, 29 Clearview Crescent, Dartmouth, N.S. B3A 2M9
Scott Wile, Petite Riviere, Lunenburg Co., N.S. B0J 2P0
Margarete Zillig, R.R. No. 1, Scotch Village, N.S. B0N 2G0

Courses Leading to B.E.(Agr.)

First Year – Class of '84

Manoochehr Babaei, No. 10, Tehran Pars, Tehran, Iran
Robert Gordon, 36 John Cross Drive, Dartmouth, N.S. B2W 1X3
Dale Hebb, Centreville, R.R. No. 2, N.S. B0P 1J0
Andrew King, Box 177, Oxford, N.S. B0M 1P0
Terry Nguyen, 130 McLean Street, Apt. 1, Truro, N.S. B2N 4W3
Keng-Wei Sim, 40 Carpenter Street, Sarawak, Malaysia
Alastair Tilley, Box 1088, Port Aux Basques, Nfld. A0M 1C0
Thomas Van Milligen, R.R. No. 6, Bridgewater, N.S. B4V 2W5
David Weatherby, R.R. No. 1, Scotsburn, N.S. B0K 1R0
Nancy Yeo, 360 Beaver Street, Summerside, P.E.I. C1N 2A4

Second Year – Class of '82

Walter Allison, Florenceville, N.B. E0J 1K0
Gerald Foster, P.O. Box 1384, Greenwood, N.S. B0P 1N0
Pierre-Yves Gasser, 2800 Ch. St. Louis, Ste-Foy, P.Q. G1W 1P2
Gregory Pace, 6544 Liverpool Street, Halifax, N.S. B3L 1Y5
Michael Tulkens, R.R. No. 1, Heatherton, N.S. B0H 1R0

Technician Diploma

First Year – Class of '83

Byron Andrews, Hunter River, R.R. No. 2, P.E.I. C0A 1N0
Robert Banks, R.R. No. 2, Kingston, N.S. B0P 1R0
John Benere, Enfield, N.S. B0N 1N0
Ian Blenkarn, R.R. No. 3, Saltsprings, N.S. B0K 1P0
Margaret Bliklager, R.R. No. 1, Vernon, P.E.I. C0A 2E0
Robert Booth, Norton, Box 81, N.B. E0G 2N0

Kevin Brown, Glassville, R.R. No. 2, N.B. E0J 1L0
 David Bulger, Folley River, Portage, R.R. No. 1, P.E.I. C0B 1W0
 Richard Burt, Box 613, Kensington, P.E.I. C0B 1M0
 Jocelyn Carroll, Milford Station, N.S. B0N 1Y0
 G. Morris Caseley, Kensington, R.R. No. 4, P.E.I. C0B 1M0
 Robert Chambers, Box 53, Lawrencetown, N.S. B0S 1M0
 Myrtle Chisholm, Box 12, Port Hawkesbury, N.S. B0E 2V0
 Karin Chodakowski, Box 92, Grand Pre, N.S. B0P 1M0
 Stephen Cousins, Box 1, Sherwood Forest Subdivision, Crapaud, P.E.I.
 C01 1J0
 Elaine Craswell, Hunter River, R.R. No. 3, P.E.I. C0A 1N0
 Gordon Cromwell, R.R. No. 2, Douglastown, N.B. E0C 1H0
 Karin Debertin, R.R. No. 1, Moncton, N.B. E1C 8J5
 John DeLong, 116 Athabaska Avenue, Riverview, N.B. E1B 2T1
 Theresa Donkin, R.R. No. 3, Truro, N.S. B2N 5B2
 E. Brent Dunphy, R.R. No. 3, Mouth of Keswick, N.B. E0H 1N0
 Lloyd Elliott, Anagance, R.R. No. 2, N.B. E0E 1A0
 Donald Finck, Avonport, N.S. B0P 1B0
 Mark Franklin, R.R. No. 6, Truro, N.S. B2N 5B4
 Gordon Furness, Vernon Bridge P.O., P.E.I. C0A 2E0
 Daniel Gallant, St. Peter's Bay, P.E.I. C0A 2A0
 Paul Gallant, Abrams Village, Box 33, R.R. No. 3, P.E.I. C0B 2E0
 Graham Gardiner, 78 Second Street, Renforth, N.B. E2H 1M5
 W. Scott Gardiner, R.R. No. 1, Port Borden, P.E.I. C0B 1X0
 Mark Gibbon, Milford Station, R.R. No. 1, N.S. B0N 1X0
 Gerard Gilbert, Oromocto, R.R. No. 1, Burton, N.B. E2V 2G2
 Wilda Gosselin, 56 Denoon Street, Pictou, N.S. B0K 1H0
 Kent Grass, R.R. No. 1, Westfield, N.B. E0G 3J0
 Perry Green, R.R. No. 3, Truro, N.S. B2N 5B2
 Gerry Groenenberg, R.R. No. 2, Lakeville, N.B. E0G 1S0
 Carol Grove, Duncan's Cove, Ketch Harbour, N.S. B0J 1X0
 Krista Harvey, 2037 Prince Street, Truro, N.S. B2N 5B2
 Harold Haslam, Breadalbane, R.R. No. 1, P.E.I. C0A 1E0
 Edison Heaney, Clinton, Kensington, R.R. No. 6, P.E.I. C0B 1M0
 Beverly Hill, 4 High Street, Truro, N.S. B2N 5A9
 Gerard Horgan, Box 524, Rothesay, N.B. E0G 2W0
 Marion Jennings, R.R. No. 1, Debert, N.S. B0M 1G0
 Deborah Johnson, R.R. No. 2, Sackville, N.B. E0A 3C0
 Brian Kelly, 19 Forest Hill Drive, Halifax, N.S. B3M 1X2
 J. Ernest Kelly, R.R. No. 2, Heatherton, N.S. B0H 1R0
 Timothy Linton, R.R. No. 1, Arthurette, N.B. E0J 1C0
 Edward MacAulay, Souris, R.R. No. 3, P.E.I. C0A 2B0
 G. Harvey MacDonald, Victoria, P.E.I. C0A 2G0
 Kenneth MacDonald, 85 Stratford Road, Charlottetown, P.E.I. C1A 7C1
 M. Colleen MacDonald, R.R. No. 2, Tatamagouche, N.S. B0K 1V0
 Darlyne MacEachern, Ballantyne's Cove, N.S. B2G 2L2
 E. Charles MacGregor, Box 155, Eastern Passage, N.S. B0J 1C0
 George Macintosh, 257 York Street, Fredericton, N.B. E3B 3P2
 Kenneth MacKenzie, North Wiltshire, R.R. No. 2, P.E.I. C0A 1Y0
 Carl MacKinnon, North Wiltshire, P.E.I. C0A 1Y0
 Allen MacLeod, 59 Dolbin Street, Sydney, N.S. B1P 1S4
 Gary Maddison, R.R. No. 2, Waterville, N.S. B0P 1V0

Michael Main, R.R. No. 1, Maitland, N.S. B0N 1T0
Allan Matters, North Wiltshire, P.E.I. C0A 1Y0
Fraser McCallum, R.R. No. 2, Box 97, Tabusintac, N.B. E0C 2A0
James McCara, R.R. No. 1, Scotsburn, N.S. B0K 1R0
Kent Molyneaux, Cornwall, R.R. No. 4, P.E.I. C0A 1H0
Donna Noble, Wilmot, N.S. B0P 1W0
Suzanne Orr, Red Bank Road, R.R. No. 1, Centre Burlington, N.S. B0N 1E0
Kenneth Patterson, R.R. No. 1, Bras d'Or, Box 114, N.S. B0C 1B0
Jean Peinsznski, 33 Dolbin Street, Sydney, N.S. B1P 1S4
Linda Petite, Box 332, Port Hawkesbury, N.S. B0E 2V0
Dwight Phillips, 99 Willow Avenue, Fredericton, N.B. E3A 2E1
Stephen Power, Coldbrook, N.S. B0P 1K0
Lisa Purcell, 206 Hill Heights Road, Saint John, N.B. E2K 2H3
Gregory Rand, Port Williams, N.S. B0P 1T0
Paul Richardson, R.R. No. 4, New Glasgow, N.S. B5H 5C7
Peter Settle, R.R. No. 2, Stewiacke, N.S. B0N 2J0
R. James Sharpe, Sharpe's Farm, Little Rapids, Box 930, Corner Brook, Nfld.
 A2L 6J2
B. Paul Sherry, Bedeque, R.R. No. 1, P.E.I. C0B 1C0
Charles Smith, R.R. No. 1, Port Howe, N.S. B0K 1K0
David Smith, Berwick, R.R. No. 1, N.S. B0P 1G0
Patricia Stacey, Box 597, Goulds, Nfld. A0A 2K0
David Steeves, 208 Summit Drive, Riverview, N.B. E1B 1N3
Mark Stirling, Centreville, R.R. No. 2, N.S. B0P 1J0
Allan Sullivan, R.R. No. 2, Rexton, N.B. E0A 2L0
Marlene Teasdale, R.R. No. 5, West River, N.S. B2G 2L3
Sharon Thompson, St. Peter's Bay, P.E.I. C0A 2A0
Tony Trenholm, 100 Simpson Drive, Saint John, N.B. E2H 2B9
David Turnbull, Cross Creek, R.R. No. 1, N.B. E0H 1E0
Anthony Van Vonderen, R.R. No. 1, Afton, N.S. B0H 1A0
Verna Vermeulen, Milford Station, N.S. B0N 1Y0
James Walker, R.R. No. 3, Sussex, N.B. E0E 1P0
R. Jeffrey Walton, 147 Noble Street, Fredericton, N.B. E3A 3C1
Kim Wheaton, 2 Admore Avenue, Amherst, N.S. B4H 1K8
J. Kenneth Yeo, Charlottetown, P.E.I. C1A 7J7

Second Year – Class of '82

Ronnie Arbing, O'Leary, R.R. No. 3, P.E.I. C0B 1V0
Ella Austin, R.R. No. 2, Whycomomagh, N.S. B0E 3M0
Arsene Babineau, Acadieville, Box 241, N.B. E0A 2T0
Gregory Banks, Fredericton, R.R. No. 2, N.B. E3B 4X3
Beverly Barkhouse, Box 117, Great Village, N.S. B0M 1L0
Stephen Barrett, R.R. No. 1, Bridgetown, N.S. B0S 1C0
Bernice Bissett, Bissett Road, R.R. No. 1, Dartmouth, N.S. B2W 3X7
Veronica Broussard, R.R. No. 1, Afton, N.S. B0H 1A0
Christopher Brown, R.R. No. 2, Bridgewater, N.S. B4V 2W1
Paul Brown, Richmond, R.R. No. 1, P.E.I. C0B 1Y0
Brian Buchanan, R.R. No. 4, Sussex, N.B. E0E 1P0
Grant Campbell, 41 Park Street, Truro, N.S. B2N 3J5
Glenda Carver, Montague, R.R. No. 1, P.E.I. C0A 1R0
Gregory Coates, Upper Gullies, Conception Bay, Nfld. A0A 4C0

Donald Comeau, Little Brook, N.S. B0W 1Z0
Michael Comeau, Meteghan, N.S. B0W 2J0
Paul Cook, R.R. No. 2, Bridgewater, N.S. B4V 2W1
Virginia Cooke, 44 Maple Avenue, Sherwood, P.E.I. C1A 6E3
Pamela Crossman, 6 Trillium Terrace, Halifax, N.S. B3M 3P5
Sharas Dauda, P.O. Box 16, Mubi, Gongola State, Nigeria
Carol Dixon, P.O. Box 358, Stewiacke, N.S. B0N 2J0
Joan Dunphy, 36 Hillcrest Street, Antigonish, N.S. B2G 1Z3
John Ferguson, R.R. No. 5, Tatamagouche, N.S. B0K 1V0
Michael Fitzgerald, Box 172, Tatamagouche, N.S. B0K 1V0
Glenn Foster, Hall Road, Greenwood, N.S. B0P 1N0
Ralph Freeze, 262 Edinburgh St., Fredericton, N.B. E3B 2C9
P. Claudette Gallant, Covehead, Little York, P.O. Box 55, P.E.I. C0A 1P0
Kerry Garland, R.R. No. 2, Waterville, N.S. B0P 1V0
Peter Gourley, 9 Chestnut Place, Kentville, N.S. B4N 2K1
Norman Gray, P.O. Box 105, Centreville, N.B. E0J 1H0
Michael Green, P.O. Box 377, Sackville, N.B. E0A 3C0
Michael Griffiths, 16 Hill Street, Amherst, N.S. B4H 2N3
Ewart Hall, P.O. Box 17, Musgravetown, Nfld. A0C 1Z0
Michael Hemphill, Debec, R.R. No. 5, N.B. E0J 1J0
D. Mitchell Henry, R.R. No. 2, Plaster Rock, N.B. E0J 1W0
Mary Jenkins, R.R. No. 1, Chatham, N.B. E1N 3A1
Hans Jost, Malagash, N.S. B0K 1E0
Sharon Kennedy, 156 Coventry Crescent, Fredericton, N.B. E3B 4P5
Colin Kent, R.R. No. 1, Truro, N.S. B2N 5A9
Keith Kickham, Charlottetown, R.R. No. 5, P.E.I. C1A 7J8
M.N. Raye Lundrigan, Box 19, Site 12, R.R. No. 1, Corner Brook, Nfld.
A2H 2N2
Larry Lutz, R.R. No. 1, Berwick, N.S. B0P 1E0
Ronald Matters, North Wiltshire, P.E.I. C0A 1Y0
John McCabe, R.R. No. 3, Westville, N.S. B0K 2A0
Lawrence McGuigan, 277 College Road, Truro, N.S. B2N 2P6
Malcolm McLean, R.R. No. 1, Eureka, N.S. B0K 1B0
Melvin McQuillan, Bonshaw, P.O., R.R. No. 3, P.E.I. C0A 1C0
Karen Meek, Canning, N.S. B0P 1H0
Kenneth Melanson, Box 205, R.R. No. 7, Pomquet, N.S. B2G 2L4
Richard Moore, Box 129, Gagetown, N.B. E0G 1V0
Sharon Murray, R.R. No. 1, Scoudouc, N.B. E0A 1N0
Pasum Mujah, P.O. Box 33, Numan, Gongola State, Nigeria
Mohamed Mustapha, c/o M.M.D. Mohammad, Agric. & Natural Resources
Division, Kaduna, Nigeria
Cynthia Northup, 1251 King Street, Windsor, N.S. B0N 1H0
Gary Noseworthy, 27 Evans Avenue, No. 207, Halifax, N.S. B3M 1C3
Daniel Orr, St. Stephen, R.R. No. 6, N.B. E3L 2Y3
Stephen Oulton, R.R. No. 3, Sackville, N.B. E0A 3C0
Randolph Pettipas, R.R. No. 2, Harve Boucher, N.S. B0H 1P0
Sharon Rand, Port Williams, N.S. B0P 1T0
Stephen Reaman, R.R. No. 3, Truro, N.S. B2N 5B2
Jean-Louis Richard, Acadieville, N.B. E0A 2T0
Wanda Robar, R.R. No. 1, Greenfield, N.S. B0T 1E0
Kimberley Robertson, P.O. Box 874, Shelburne, N.S. B0T 1W0
Rejean Robichaud, R.R. No. 1, Rogersville, Acadieville, N.B. E0A 2T0

Catherine Romans, 23 Howland Drive, Lower Sackville, N.S. B4C 1S5
Daniel Saunders, R.R. No. 1, Truro, N.S. B2N 5A9
Joshua Sini, c/o Allahaji Abbo Jimeta, M.O.W., Yola, Gongola State, Nigeria
Kevin Spicer, Berwick, R.R. No. 2, N.S. B0P 1E0
Peter Stavert, Freetown, R.R. No. 1, P.E.I. C0B 1L0
Helen Steele, R.R. No. 3, Canning, N.S. B0P 1H0
Susan Stewart, R.R. No. 4, St. George, N.B. E0B 2J0
Steven Thomson, North Tryon, P.E.I. C0B 1A0
Peter van Diepen, Morell, R.R. No. 2, P.E.I. C0A 1S0
Joseph Van Oirschot, R.R. No. 2, Antigonish, N.S. B2G 2K9
John Vermeer, R.R. No. 2, Pleasant Valley, N.S. B2G 2K9
Brian Watts, P.O. Box 4, York, P.E.I. C0A 1P0
Danny White, R.R. No. 1, Maitland, N.S. B0N 1T0
Bruce Withrow, Upper Rawdon, R.R. No. 1, N.S. B0N 2N0
Pamela Woodman, Falmouth, R.R. No. 2, N.S. B0P 1L0

Technology Diploma

First Year – Class of '83

Douglas Anderson, R.R. No. 3, Baddeck, N.S. B0E 1B0
Carol Anstey, 23 Trinity Avenue, Apt. 303, Dartmouth, N.S. B3B 4H6
Rita Bekkers, Site 2, Comp. 132, Lake Echo, N.S. B0J 2S0
Cheryl Belliveau, 357 Windsor Street, St. John, N.B. E2M 2Z4
Steven Berry, Havre Boucher, N.S. B0H 1P0
Daniel Boudreau, Box 15, Monastery, N.S. B0H 1W0
Abraham Buttimer, Box 595, R.R. No. 1, Bathurst, N.B. E2A 3Y5
George Chisholm, Bear River, Digby, N.S. B0S 1B0
Wendy Coolen, 31A Crestfield Drive, Bedford, N.S. B4B 1E8
Douglas Cox, R.R. No. 1, Scotch Village, N.S. B0N 2G0
Thomas Duffy, Charlottetown, R.R. No. 5, Fort Augustus, P.E.I. C1A 7J8
Carl Duivenvoorden, Armstrong Brook, N.B. E0B 1B0
Valerie Ervin, R.R. No. 2, Stewiacke, N.S. B0N 2J0
David Fullerton, Great Village, N.S. B0M 1L0
Moira Giffin, 174 Colonial Heights, Fredericton, N.B. E3B 5M1
Robert Glenwright, 47 Churchill Street, Truro, N.S. B2N 1M9
Philip Hicks, R.R. No. 4, Centreville, N.B. E0J 1H0
Carey Isenor, R.R. No. 1, Truro, N.S. B2N 5A9
Karen Janes, R.R. No. 3, Bridgewater, N.S. B4V 2W2
Timothy Jansen, Box 101, C.F.B. Greenwood, N.S. B0P 1N0
Graeme Jones, P.O. Box 2811, Dartmouth East Postal Station, Dartmouth,
 N.S. B2W 4R4
Carmelle LeBlanc, Margaree Forks, N.S. B0E 2A0
John MacLeod, 69 Lake Road, Glace Bay, N.S. B1A 2H2
Scott MacLeod, 96 Main Street, Springhill, N.S. B0M 1X0
Kevin McNaughton, 30 Phillip Street, Truro, N.S. B2N 3B3
Judith Nolan, R.R. No. 6, Truro, N.S. B2N 5B4
Jennifer Racine, 46 Dahlia Street, Dartmouth, N.S. B3A 2S2
Beverley Richardson, Site 8, Box 20, R.R. No. 1 Waverley, N.S. B0N 2S0
Janet Robicheau, Westport, Brier Island, N.S. B0V 1H0
Roberta Sanford, Box 1384, Liverpool, N.S. B0T 1K0
Johanne Skora, General Delivery, Iskut, N.B. V0J 1K0

Margaret Tate, R.R. No. 1, Heatherton, N.S. B0H 1R0
F. Yvonne Vallis, 1331 Main Street, Louisbourg, N.S. B0A 1M0
Kathryn Watson, 9 Nightingale Drive, Halifax, N.S. B3M 1V2
Michael Weston, Centreville, N.B. E0J 1H0
Deborah Wynberg, R.R. No. 9, Moncton, N.B. E1C 8K3
Marian Zinck, General Delivery, Chester, N.S. B0J 1J0

Second Year – Class of '82

Donatus Ameh, c/o S. Ameh, Obu Branch, P.A. Benue State, Nigeria
Mary Burzynski, 166 North Street, Moncton, N.B. E1C 5Y1
Nelson Christie, Temperance Vale, N.B. E0H 1W0
Allan Cummiskey, Charlottetown, R.R. No. 5, P.E.I. C1A 7J8
Catherine Deveau, 4 Greenvale Crescent, Cole Harbour, N.S. B2W 3X7
Noel Enman, Vernon River, P.E.I. C0A 2E0
Jeffrey Everett, Perth-Andover, R.R. No. 5, N.B. E0J 1V0
Gregory Fergus, 45 Grandview Avenue, Trenton, N.S. B0K 1X0
Joyce Ferguson, R.R. No. 5, Tatamagouche, N.S. B0K 1V0
Anne Fraser, 34 Duncan Avenue, Kentville, N.S. B4N 1N5
Janice Giles, 22 Hingley Avenue, Truro, N.S. B2N 3B8
Linda Hamilton, R.R. No. 5, Truro, N.S. B2N 5B3
Abdulrahman Ibrahim, G17 Gambari Road, Ilorin, Kwara State, Nigeria
Godspeace Ihunna, Box 35, Ngodo Isuochi, Okigwe, Imo State, Nigeria
Obinnaya Ikonte, Amankwo Uzuakoli, P.O. Box 40 Uzuakoli, Imo State, Nigeria
Ralph Jardine, 24 Ingraham Street, North Sydney, N.S. B2A 2M1
Modu Kolo, 9 Ali Kikwa Street, Maiduguri, Borno State, Nigeria
Stephen Lank, 94 McGill Avenue, Charlottetown, P.E.I. C1A 2K4
Sharon Lockwood, 51 Lockhart Avenue, Truro, N.S. B2N 5R7
John Lundrigan, Box 19, Site 12, R.R. No. 1, Corner Brook, Nfld. A2H 2N2
A. Findlay MacRae, P.O. Box 1426, Kent Avenue, Wolfville, N.S. B0P 1X0
Marion MacRae, 21 Bayview Street, Apt. A, Truro, N.S. B2N 2E2
Michele Marchand, 33 Tilley Court, Lower Sackville, N.S. B4C 1S9
David Matthews, Lower Sackville, N.S. B4C 2S6
Umar Muhammed, c/o Alhaji Mohammad B. Kutigi, Ministry of Nat. Res.,
Minna, Niger State, Nigeria
Adebayo Ogunkelu, SW8/1240, Imalefalafia Street, Oke, Ado Ibadan, Oyo
State, Nigeria
Lisa Olie, 16 Linden Lane, Halifax, N.S. B3R 1M9
David Pace, R.R. No. 1, Tantallon, N.S. B0J 3J0
Ann Richardson, 44 Kirkwood Drive, Moncton, N.B. E1A 4G7
Joseph Rowlands, P.O. Box 1078, Marystown, Nfld. A0E 2M0
Ian Shaw, Uigg, Vernon Bridge P.O., P.E.I. C0A 2E0
Janice Stewart, 42 Summer Street, Charlottetown, P.E.I. C1A 2R1
Mark Tracey, R.R. No. 1, Windsor, N.S. B0N 2T0
Yakubu Tumbau, c/o Gumau Sec. School, Gumau, Bauchi State, Nigeria
Patrick Ube, P.O. Box 23, Edem Ekpat, Etinan, Cross River State, Nigeria
Steven Vaughan, 2790 Connolly Street, Halifax, N.S. B3L 3N2
Crystal Wilson, 295 College Road, Apt. No. 1, Truro B2N 2P6
Donna Wilson, R.R. No. 2, Truro, N.S. B2N 5B1
Nancy Zwicker, R.R. No. 4, Bridgewater, N.S. B4V 2W3

Special Students

George Bokma, Shubenacadie, N.S. B0N 2H0
Diane Brisebois, 13863 – 27 Street, Edmonton, Alberta T5Y 1A2
Murray Bulger, R.R. No. 1, Musquodoboit Harbour, N.S. B0J 2L0
Ian Cameron, Box 308, Sackville, N.B. E0A 3C0
Pauline Duivenvoorden, Armstrong Brook, N.B. E0B 1B0
Hildur Fossberg, Troll Resort, Quesnel, B.C. V2J 3J1
Yvonne Frederick, Box 467, Coaldale, Alberta T0K 0L0
Jessica Macnab, Belle River P.O., P.E.I. C0A 1B0
Kenneth McEachern, 74 Falwood Crescent, Calgary, Alb. T3J 1E3
Lillian Roper, North River, Cornwall, R.R. No. 4, P.E.I. C1A 0H0
Charles Surette, P.O. Box 550, Truro, N.S. B2N 5E3
Marc Tufts, Saulnierville, R.R. No. 1, N.S. B0W 2Z0
Gary Wallace, R.R. No. 2, Stewiacke, N.S. B0N 2J0
Blair Woodrow, 2339 – 22 Street, N.W. Calgary, Alta. T2M 3W5

