

*Dale Ellis*



# **Nova Scotia Agricultural College**

***Calendar***  
**1984-1985**



'Serving Atlantic Canada'

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# Seventy-Ninth Annual Calendar 1984-1985

of the  
Nova Scotia  
Agricultural College  
Truro

Under  
The Nova Scotia Department  
of Agriculture and Marketing

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# Application for Admission to the *Degree* Courses (1984)

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 1983-84 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 application to Technical Courses see page 2.*

# Application for Admission to the *Technical* Courses (1984)

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 \_\_\_\_\_

- from which <sup>or</sup> you graduated \_\_\_\_\_

If you were not in high school during the 1983-84 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 1985)

	First Year	Advanced Standing
<b>Technician:</b>		
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"/>
<b>Technology:</b>		
Biology Laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Chemistry Laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Landscape 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 application to Degree Courses see page 1.*





# 1984-1985 Calendar

## 1984

### July

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### August

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

### September

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

### October

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### November

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

### December

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## 1985

### January

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

### February

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

### March

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

### April

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

### May

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

### June

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

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# Calendar for Session 1984-1985

## 1984

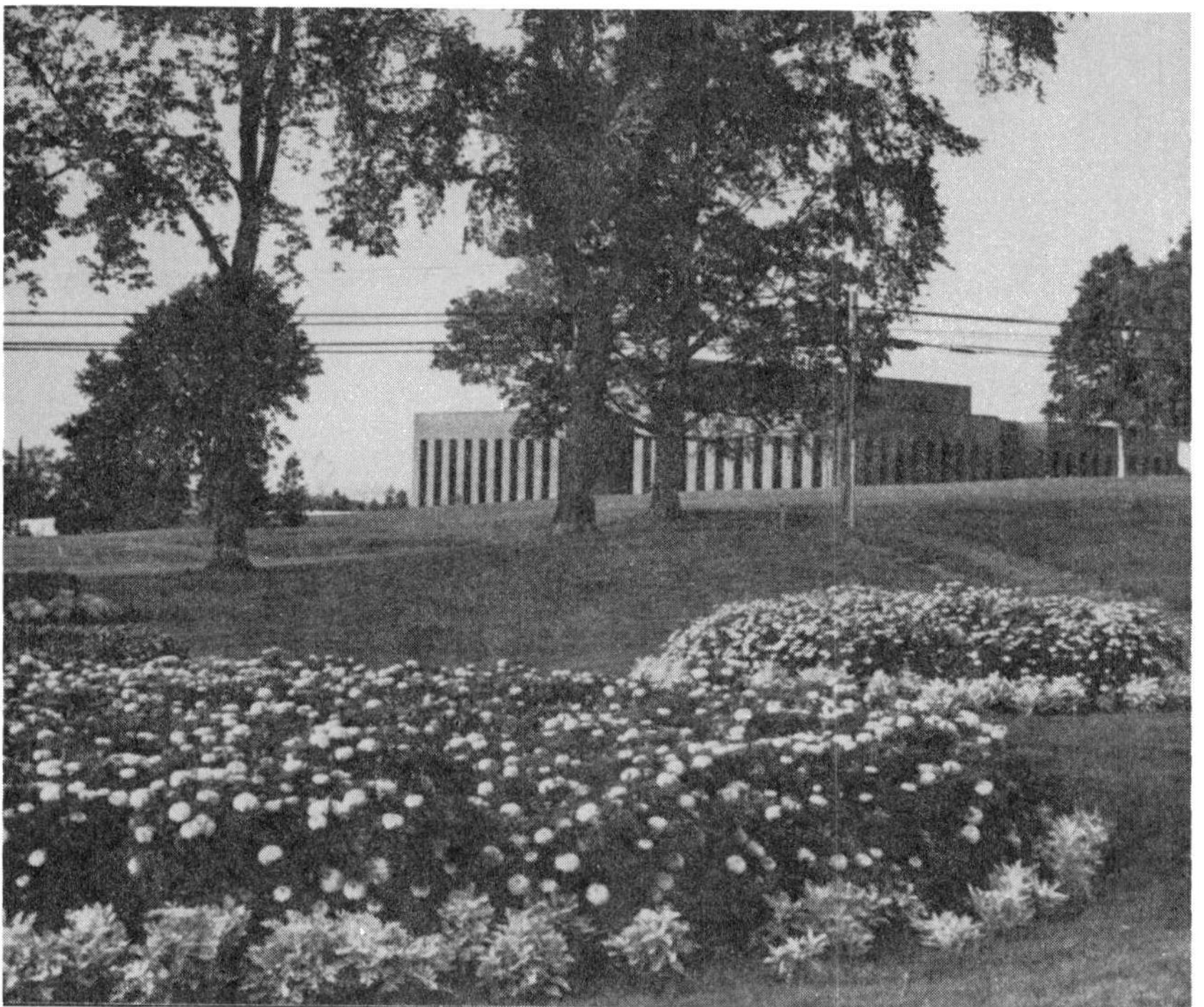
- September 10      Registration for students registering for the first time.
- September 11      Registration for returning students.
- September 12      Lectures commence at 8:15 a.m.
- October 8            Thanksgiving Day. No classes.
- October 26          College Royal Showday. No classes.
- November 5          Long weekend. No classes.
- December 10-20    First semester examinations.

## 1985

- January 3            Second semester lectures commence at 8:15 a.m. Registration for second semester and for pre-tech.
- February 18-22     Mid-term break for individual study.
- April 10-20          Second semester examinations.
- May 1                Graduation exercises.



*Cumming Hall, NSAC*



*Library Building, NSAC*

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# 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)

## **Reference Librarian**

*S.B. King*, B.Mus.Ed. (Dalhousie), M.L.S. (Dalhousie)

## **Dean of Students - Chaplain**

*Rev. D.I. MacEachern*, B.A. (Mt. Allison), M.Div. (Pine Hill)

## **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)

## **Farm Manager**

*J.J. Brennan*, B.Sc. (Agr.) (McGill) - on leave

## **Business Manager**

*R.F. McEwan*

## **Secretary**

*Mrs. A. Marie Hartigan*

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# 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 and Head

*D.A. Allen*, B.Sc. (Eng.) (Guelph), M.Sc. (Agr.Eng.) (Purdue)

Associate Professor

*J.D. Cunningham*, B.S.A. (Toronto), B.E. (Nova Scotia Technical College), M.A.Sc. (Technical University of Nova Scotia)

Assistant Professor

*F.L. Desir*, B.Sc. (Agr.Eng.) (McGill), M.Sc. (McGill)

Lecturer

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

Assistant Professor

*M.N. Rifai*, M.Sc. (Nitra), Ph.D. (Nitra)

Assistant Professor

## Animal Science

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

Professor and Head

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

Associate Professor

*M.L. Connor*, B.Sc. (Agr.) (Guelph), M.Sc. (Manitoba), Ph.D. (Manitoba)

Assistant Professor

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

Professor

*B. Emmanuel*, B.Sc. (Agr.) (Heb. Jerusalem), M.Sc. (Univ. of Dublin), Ph.D. (Alberta)

*M.A. Forbes*, B.S. (Animal and Veterinary Sciences) (Maine)

Lecturer

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

Associate Professor and Registrar

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

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

*W.G. Mathewson*, B.Sc. (Agr.) (Aberdeen), D.T.A. (Trinidad), M.Sc. (Aberdeen)

Associate Professor

*D.L. Patterson*, B.Sc. (Alberta), M.Sc. (Guelph), Ph.D. (Guelph)

Assistant Professor

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# Faculty

## Biology

*L.A. McFadden*, B.Sc. (Agr.) (McGill), M.Sc. (Cornell), Ph.D. (Cornell)  
Professor and Head

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

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

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

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

*A.B. Gray*, B.Sc. (Bishops), M.Sc. (McGill)  
Assistant Professor

*J.-P.R. Le Blanc*, B.A. (Montreal), B.Sc. (Quebec), Ph.D. (McGill)  
Assistant Professor

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

*M.G. Sampson*, B.Sc. (Dalhousie), B.Sc. (Agr.) (McGill), M.Sc. (McGill)  
Lecturer

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

## Chemistry

*H.M. MacConnell*, B.Sc. (Agr.) (McGill), M.Sc. (McGill)  
Associate Professor and Head

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

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

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

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

*J.C. Miller*, B.Sc. (Agr.) (Guelph), M.Sc. (Alberta)  
Lecturer

*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

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

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# Faculty

## **Economics and Business Management**

*J.C. Tait*, B.Sc. (Agr.) (McGill), M.Sc. (New Hampshire)  
Associate Professor and Head

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

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

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

*Y.R. Surry*, B.A. (Paris), M.A. (Paris), M.Sc. (Guelph)  
Lecturer

## **Humanities**

*K.S. Marchant*, B.P. Ed. (New Brunswick), M.S. (Springfield)  
Associate Professor and Head

*Parker Cox*, B.A. (Acadia), M.A. (Toronto)  
Professor Emeritus

*Rev. D.I. MacEachern*, B.A. (Mt. Allison), M.Div. (Pine Hill)  
Associate Professor

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

*L.L. Sanderson*, B.Sc. (Agr.) (Guelph), M.Sc. (Guelph)  
Lecturer

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

*J.M. Smith*, B.P. Ed. (Dalhousie)  
Lecturer

## **Mathematics and Physics**

*S.G. Smith*, B.Sc. (Mt. Allison), M.Sc. (Windsor)  
Associate Professor and Head

*D.G. Bishop*, B.Eng. (Agr.) (Technical University of Nova Scotia), M.Eng. (Agr.)  
(Technical University of Nova Scotia)  
Assistant Professor

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

*I.M. Fraser*, B.Sc. (Dalhousie), M.A. (Maine)  
Associate Professor and Vice-Principal

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

*V.L. Saxon*, B.Sc. (Dalhousie), M.B.A. (Dalhousie), B.Ed. (Acadia), B.Eng. (Nova Scotia  
Technical College)  
Associate Professor

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# Faculty

## Plant Science

*J.S. Bubar*, B.Sc. (Agr.) (McGill), M.S. (Pennsylvania State), Ph.D. (McGill)  
Professor and Head

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

*C.D. Caldwell*, B.Sc. (Mt. Allison), M.Sc. (Dalhousie), Ph.D. (East Anglia)  
Assistant Professor

*R.W. Daniels*, B.Sc. (Agr.) (McGill), M.S. (Michigan State)  
Associate Professor - on leave

*J. Fraser*, B.Sc. (London), M.Sc. (Aberdeen), Ph.D. (Canterbury)  
Assistant Professor

*T.H. Haliburton*, B.Sc. (Agr.) (McGill), M.S. (Cornell)  
Associate Professor

*W.J. Higgins*, B.Sc. (Mt. Allison), M.S. in Ed. (Niagara)  
Associate Professor

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

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

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



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# Schedule of Payments

## Deposits

In the letter that offers final acceptance the student is asked to forward to the Registrar's office, before August 2, a \$25 registration deposit and, for students who want a place in residence, a \$75 room deposit. The receipt for \$100 confirms the student's acceptance of the offer of admission, assures the student of a place in the course, and reserves a place for the student in residence. The receipt of the \$25 deposit, only, confirms the student's acceptance of the offer of admission, assures the student's place in the course, and indicates that the student does not want to have a place reserved in residence.

Deposits are subtracted from the total payments due at registration in September (see page 13).

The student must have *final* acceptance before submitting a deposit. Deposits submitted by students who have not received final acceptance will be returned.

## Payments at Registration

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.

The amounts indicated are for the regular academic year. Students who take courses or projects in the summer period and use residence facilities will be charged for room and board at the rate of \$80 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 do not receive their Certificate of Eligibility (Schedule I form) before registration, must pay the required fee at registration time. Students should therefore arrange the necessary temporary financing before their arrival for registration.

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# Schedule of Payments

## Degree Courses

*All charges are subject to change.*

Payment due Sept. 10 (returning students Sept. 11) 1984

Tuition _____	\$ 500
Board and lodging _____	\$1,160
Caution, laboratory, and key deposit _____	\$ 32
Students' Council and athletics _____	\$ 70
Medical fee _____	\$ 6
	\$1,768
Books (estimated) _____	\$ 175

Payment due January 3, 1985

Tuition _____	\$ 500
Board and lodging _____	\$1,230
	\$1,730
Books (estimated) _____	\$ 175

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

## Technician and Technology Courses

*All charges are subject to change.*

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 \$500 per semester.

Payment due Sept. 10 (returning students Sept. 11), 1984

Board and lodging _____	\$1,160
Caution, laboratory, and key deposit _____	\$ 32
Students' Council and athletics _____	\$ 70
Medical fee _____	\$ 6
	\$1,268
Books (estimated) _____	\$ 150

Payment due January 3, 1985

Board and lodging _____	\$1,230
Books (estimated) _____	\$ 150

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## Schedule of Payments

Each student who lives in residence pays \$10 for use of the automatic washer and dryer equipment.

The United Students' Council has approved a fee of \$6 for the Medical Services Fund, to be collected from all students at the time of registration. The fund provides nonprescription drugs and other supplies for the infirmary. It will not provide for prescription drugs, hospitalization, or operations. All doctors' 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 \$26 per week.)

Students who withdraw after the date on which the Dropped Failure status takes effect are not permitted to register in the following semester.

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 Services Fund does not cover that person.

## Residence Accommodations

Board and lodging facilities are available for male and female students. Students who have received final acceptance and want to reserve a place in residence are required to pay a deposit of \$75. Returning students must pay this fee before June 30 and new students must pay it when they receive their letters of admission to the College. The deposit will be credited to the student's board and lodging account. It will be refunded to any applicant who finds it necessary to cancel the reservation, provided that notice of cancellation reaches the Registrar's Office not later than August 10.

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

- after dinner on September 9 for all new students,
- after dinner on September 10 for all other students.

Any student who wishes to use residence facilities before these dates will be charged at the regular rate.

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# Schedule of Payments

## Caution and Laboratory Deposit

Every student, at the time of registration, must make a cash deposit of \$32 to the Registrar to cover breakage.

Damage to floors, walls, doors, windows, lighting, the sprinkler system, 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.

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# 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 totalling more than \$4,000 in one year. Application for a Certificate of Eligibility must be made to the issuing authority of the applicant's province of residence.

Under the plan, borrowers 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 his or her bank to arrange for funds.

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## Financial Aid for Students

### Living Allowance for Prince Edward Island Students

A living allowance of approximately \$25 per week will be provided from federal-provincial funds for Prince Edward Island students in technical courses who are in good standing if an application is made to the Director of Rural Development, Department of Agriculture, 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 the 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.

### A.F.A.C. Student Exchange Assistance

The Association of the Faculties of Agriculture in Canada sponsors a Student Exchange Program to assist selected students to take a year of study at a Canadian Faculty of Agriculture other than their home institution. The Program provides \$200 for one student in the B.Sc. (Agr.) program from each of the Faculties of Agriculture in Canada. Credit for equivalent subjects is transferred to the home university. Students in their final year are not eligible. A letter of application must be received at the Registrar's Office, NSAC, not later than March 15 of the year in which the transfer is proposed.

### Scholarships

Detailed information is given on pages 120 to 131.

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# 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 is proceeding on schedule and students who entered the first year of the B.Sc. (Agr.) course in the fall of 1981 or later can complete all four years at NSAC in one of the four options: Plant Science, Animal Science, Agricultural Economics, and Plant Protection. It is expected that students who were admitted to the first year of this program in 1983 and the years following will have additional options — such as Agricultural Chemistry/Soils — available to them.

Most students now entering the program leading to a B.Sc. (Agr.) will complete their degrees at NSAC. Those who choose options not offered at the College can transfer, at the end of the second year of the B.Sc. (Agr.) program without interruption, to the Ontario Agricultural College of the University of Guelph, Macdonald College of McGill University, the University of Maine, or the Faculty of Agriculture at another university for the final years of the program.

A wide range of courses are offered at NSAC in addition to those leading to a B.Sc. (Agr.). In 1984-85 credits toward an engineering degree in Agriculture, a Pre-Veterinary course, five Technician courses, five Technology courses, and numerous Vocational short courses will be offered.

Students who take the one-year Pre-Veterinary course and are successful can apply for admission to the University of Guelph to continue in the course leading to a Doctor of Veterinary Medicine. Those who are not admitted to 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 Engineering degree course are admitted without interruption to Macdonald College of McGill University or they may apply to the Technical University of Nova Scotia or other institutions with engineering programs for their final years.

The various courses arranged for the 1984-85 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 fulfill 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.

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## General Information

### 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 79 years is conclusive evidence that students obtain a sound agricultural education in the courses offered.

The College buildings — Cumming Hall, Harlow Institute, Banting Building, Collins Horticultural Building, Cox Institute of Agricultural Technology, Boulden Building, Hancock Veterinary Building, the Library, and a modern farm building complex — provide excellent teaching and research facilities, as well as offices and laboratories for faculty and staff, and for some of the staff of the Nova Scotia Department of Agriculture and Marketing. Fraser House, Trueman House, Chapman House, and Jenkins Hall provide excellent living and dining accommodations for male and female students. The campus has a modern and complete Athletic Centre, as well as the Alumni Theatre.



*One of three residence buildings at NSAC.*



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# General Information

## Facilities

### 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 and Credit Unions

- 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
- the Continental Bank of Canada
- Colchester Credit Union Ltd.

### Express and Freight

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

### College Colors

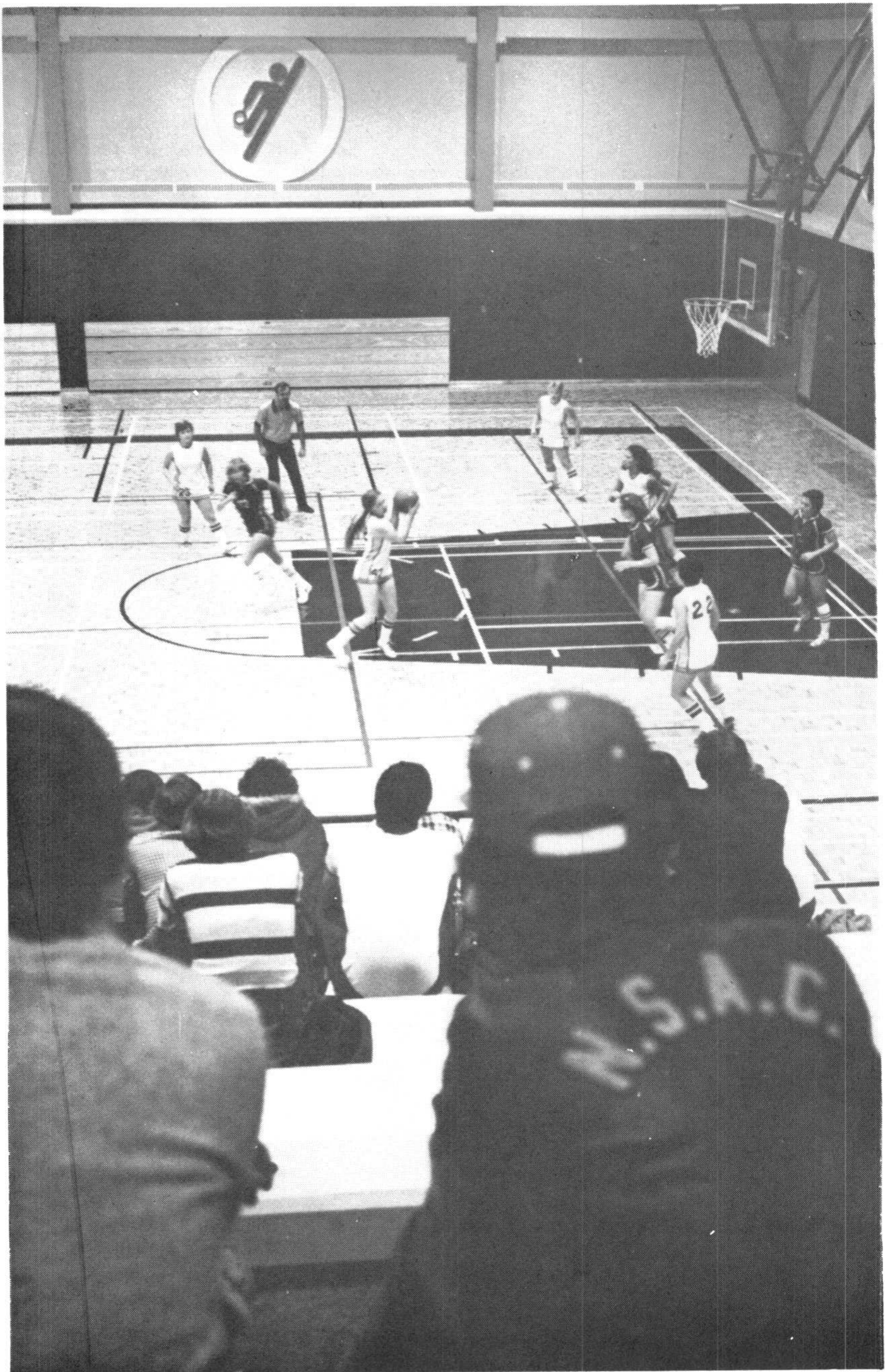
Royal Blue and Regular Gold

### 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 cooperation with the Executive of the United Students' Council and with 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.



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## **General Information**

### **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 posted on bulletin boards at various locations on campus. Information on career planning and potential employers is also available at the Placement Office and the 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.



*Action in the Athletic Centre*

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# General Information

## Student Activities

### 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

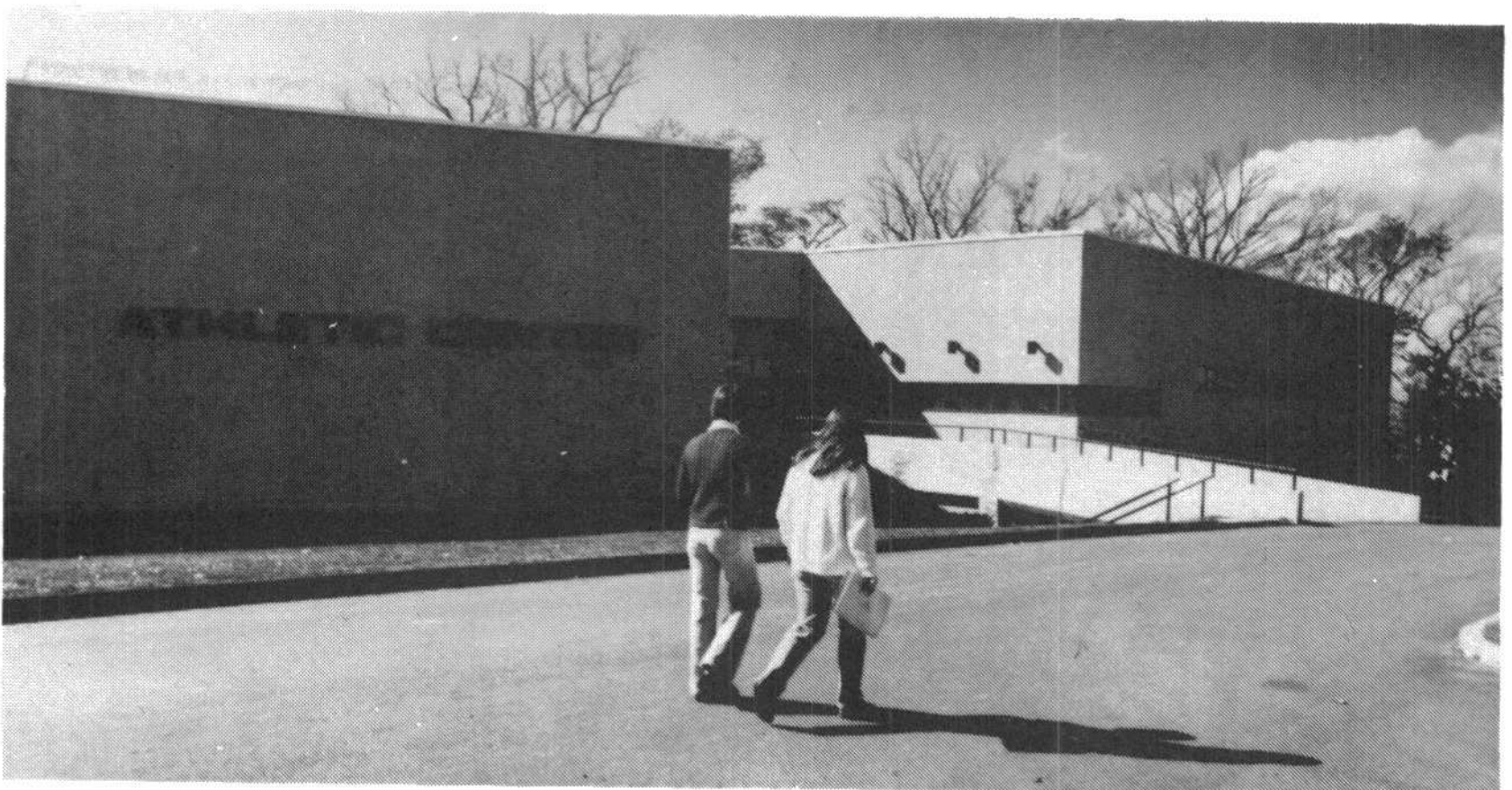
All social activities on the campus are supervised by a committee appointed by the United Students' Council. Informal dances and other social functions are held from time to time.

## Athletics

The athletic program involves the following activities:

**Recreational activities.** The Athletic Centre provides an opportunity for students to choose a number of activities to enjoy during their leisure time. Racquetball, squash, and badminton are very popular racquet games. The spacious weight room allows the enthusiast the use of a universal machine, three hydra machines, and free weights. Other equipment available to students for off-campus activity includes cross-country skis, golf clubs, and tennis racquets. Swimming and curling facilities are also available to students during the academic term.

**Intramural athletics.** The intramural program continues throughout the year with units of competition including soccer, softball, volleyball, hockey, basketball, badminton, table tennis, racquetball, and squash. Competition may be on a co-ed, class, residence floor, or league draft system.



*Home of the Rams*

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# 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.

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 or examinations, or to be otherwise evaluated in the course audited.

An 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.



*Extending Cox Institute in 1983*

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# Rules and Regulations

## General Regulations

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

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. Hazing as a part of initiation is 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 glasses. Sheets, pillowcases, blankets, and furniture will be provided by the College.

Students requiring 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 on campus by a student living in residence is a privilege that may be withdrawn at the discretion of the Principal.

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# Rules and Regulations

## Medical

Each candidate that is accepted will be sent a medical form; any student who does not receive one in his or her letter of final acceptance should ask for one. At registration, new students must have their completed forms with them. If required, students must submit to further medical examinations.

Students on holiday or accepted candidates for admission who contract any contagious or infective diseases, or who reside in any dwelling in which any such diseases exist, 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 or she will be 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's 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 participation in outside games will not receive an attendance credit for the time lost.



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# Summary of Academic Programs

## Agricultural Science

The Nova Scotia Agricultural College offers a complete four-year program of study leading to the degree of a Bachelor of Science in Agriculture, or a 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, the University of Maine, or Faculty of Agriculture at another university.

## Agricultural Engineering

NSAC offers the first three years of a four- or five-year program in Agricultural Engineering. Students can transfer without interruption to Macdonald College of McGill University or they can apply to the Technical University of Nova Scotia or another engineering faculty 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 a Doctor of Veterinary Medicine degree.

## Technician Courses

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

## Technology Courses

Six programs are offered which lead to diplomas of Technology; five are two-year courses and one is a one-year course for graduate technicians.

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

Farming Technology 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 Farming 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

Short courses and Continuing Education courses, varying in length, are offered in a wide range of agricultural topics.

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# Explanation of Terms and Codes

The subjects listed in the syllabi and in the descriptions of subjects beginning on page 62 are identified as to discipline and approximate academic level by letter and number codes. The disciplines are coded as follows:

Agricultural Engineering	<b>AE</b>	Economics and Business	<b>EB</b>
Animal Science	<b>AS</b>	Humanities	<b>H</b>
Biology	<b>B</b>	Mathematics and Physics	<b>MP</b>
Chemistry - Soils	<b>CS</b>	Plant Science	<b>PS</b>

All subjects with numbers of 100 or over are degree credits. Most subjects with numbers between 100 and 190, inclusive, are part of the first year of the curriculum and numbers 200 to 290 are 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 the 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 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, CS12 is a Chemistry subject which is usually offered in the first year, first semester of the Technician courses, while PS49 is a Plant Science subject which is offered in the second year, second semester of the Technician programs. B71 is a Biology subject offered in the second year, second semester of the Chemistry Laboratory Technician course.

The following definitions are important for the interpretation of the information provided in the section of the Calendar entitled Description of Subjects, which begins on page 62:

*A prerequisite* is a subject that is essential preparation for success in the subject to which it is assigned. A student may, with the permission of the instructor, be admitted to the subject without obtaining a pass in the prerequisite.

*A corequisite* is a subject which, if not taken previously, must be taken concurrently with the subject to which it is assigned.

*A preparatory* is a subject which will provide the student with the best background for the subject to which it is assigned. Students may be admitted to a subject without passing the preparatory that is assigned to it, provided that they consult first with the instructor.

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# Degree Courses

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

Students in the Agricultural Sciences, B.Sc. (Agr.) courses begin to specialize in their second year. They choose from a variety of options. The four major options available at NSAC are Plant Science, Animal Science, Agricultural Economics, and Plant Protection. A fifth option, Agricultural Chemistry - Soils may be available for students admitted to the B.Sc. (Agr.) course in 1984. Other options, such as 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.

Students who graduate from the B.Sc. (Agr.) program in good standing will usually have opportunities to take post-graduate studies through Assistantships for a Master of Science or Doctor's (Ph.D.) degree at faculties of agriculture in Canada and the U.S.A., if they so wish.

Engineering students who successfully complete the first three years of the Agricultural Engineering degree course can proceed to Macdonald College of McGill University, or can apply to the Technical University of Nova Scotia or to another 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 a Doctor of Veterinary Medicine degree 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 successfully complete the prescribed subjects and number of credits, and who make an average at or above the minimum required, 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 marks 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 will be awarded to one who has attained an average of at least 75%.

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# Degree Courses

## Academic Standing

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

Students must have an overall average of 60% or better in all subjects taken (which must total not less than 15) in the final two years of the B.Sc. (Agr.) program.

## 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. Students who are accepted but who have not successfully completed Physics at the Grade XII university preparatory level must take Physics MP090 in their first year at NSAC.

All candidates for admission to the Agricultural Engineering 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.

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 a mark average of at least 50% and who has passed at least half of the subjects taken may write one supplemental examination in each failed subject in which the mark is 40% or higher. The supplemental examination (or examinations) must be written in the late June supplemental exam period immediately following the failure. A student in the final year may write one supplemental examination in January, if passing that examination and all final semester examinations makes the student eligible for graduation.

No student in any degree or technical program is permitted to write more than six supplemental exams.

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# Degree Courses

## Supplemental Examinations

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 to the Registrar's Office the supplemental examination fee of \$20 per exam no later than June 7th for the June supplemental examination period.

No supplemental examination is to be written until the required fee has been paid. If a student does not show up to write a supplemental examination, the fee is forfeited. Should a candidate for a supplemental examination not give notice or 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 \$30 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 Institute 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 the options before the commencement of the third semester and continue in that major field of study until they graduate. Options offered at NSAC are:

- Agricultural Economics
- Agricultural Chemistry-Soils (first offered in 1985-86)
- 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, the University of Guelph, or the University of Maine.

NSAC has offered a program leading to a degree in Agricultural Science for 79 years. In 1980, it received approval to offer all four years of that course. 1984-85 is the first year in which all four years of the program will be offered.

## Minimum Requirements

Academic requirements for the Bachelor of Science degree 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.

A minimum average of 60% in the subjects taken in the final two years is also required.

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# Degree Courses

## Bachelor of Science in Agriculture — B.Sc. (Agr.)

### Syllabus

#### Year 1 — All Options

##### Semester I

B100 The Plant Kingdom  
CS100 Chemical Principles  
H200 Technical Writing, and English  
and American Authors  
MP100 Calculus and Analytic Geometry I  
PS100 Principles of Crop Production

##### Semester II

AS100 Introductory Animal  
Science  
B110 The Animal Kingdom  
CS110 Organic Chemistry  
EB110 Economics of Agriculture  
MP105 Calculus and Analytic  
Geometry II

#### Years 2, 3 and 4 — Agricultural Chemistry-Soils

*This option will be offered first in the 1984-85 academic year. For detailed information, contact the Registrar.*

#### Years 2, 3, and 4 — Agricultural Economics

##### Semester III

CS220 Soil Science  
EB200 Microeconomics I  
EB210 Financial Accounting I  
EB260 Mathematical Economics  
*Elective*<sup>1</sup>

##### Semester IV

EB205 Microeconomics II  
EB215 Financial Accounting II  
H205 Canadian Literature  
MP200 Statistics  
*Elective*<sup>1</sup>

##### Semester V

EB310 Cost Accounting  
EB335 Business Marketing  
EB340 Farm Management I  
EB360 Econometrics  
*Elective*<sup>1</sup>

##### Semester VI

EB325 Operations Research  
EB330 Agricultural Market and  
Price Analysis  
EB355 Macroeconomics I  
MP220 Computer Science  
*Elective*<sup>1</sup>

##### Semester VII

EB400 Resource and Environmental  
Economics  
EB405 Macroeconomics II  
EB415 Business Law  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

##### Semester VIII

EB420 Agricultural Policy  
EB425 Research Methods  
EB440 Farm Management II  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

<sup>1</sup>*Electives must include two science subjects and one subject from each of Agricultural Engineering, Animal Science, and Plant Science.*

# Degree Courses

## Bachelor of Science in Agriculture — B.Sc. (Agr.)

### Years 2, 3 and 4 — Agricultural Mechanization

*This option will be first offered in the 1984-85 academic year. For detailed information, contact the Registrar.*

### Years 2, 3 and 4 — Animal Science

#### Semester III

B200 Cell Biology  
B240 Introduction to Genetics  
CS200 Bio-Organic Chemistry  
CS220 Introduction to Soil Science  
MP110 Modern Physics

#### Semester V

AS300 Physiology of Farm Animals  
AS305 Animal Nutrition  
AS310 Animal Breeding  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

#### Semester VII

*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

#### Semester IV

B225 Microbiology  
B245 Agricultural Genetics  
CS205 Biochemistry  
H205 Canadian Literature  
MP200 Statistics

#### Semester VI

AS315 Reproductive Physiology  
AS320 Animal Health  
AS325 Feeds and Feeding  
EB355 Macroeconomics I  
*Elective*<sup>1</sup>

#### Semester VIII

AS450 Seminar and Project  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

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

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# Degree Courses

## Bachelor of Science in Agriculture — B.Sc. (Agr.)

### Years 2, 3 and 4 — Plant Protection

#### Semester III

B200 Cell Biology  
B240 Introduction to Genetics  
B265 Taxonomy of Vascular Plants  
CS200 Bio-Organic Chemistry  
MP110 Modern Physics

#### Semester IV

B225 Microbiology  
B260 Plant Physiology  
CS205 Biochemistry  
H205 Canadian Literature  
MP200 Statistics

#### Semester V

B300 Principles of Plant Pathology  
B310 Mycology  
B320 General Entomology  
B335 Weed Science  
CS220 Soil Science

#### Semester VI

B305 Economic Plant Pathology  
B325 Economic Entomology  
MP220 Computer Science  
Crop Production Elective  
*Elective*<sup>1</sup>

#### Semester VII

B330 Ecology  
B400 Soil Microbiology  
B449 Seminar and Project  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

#### Semester VIII

B450 Seminar and Project  
EB355 Macroeconomics I  
H325 Technology in  
Agr. Communications  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

<sup>1</sup>*Electives must include one Economics or Humanities subject and one Agricultural Engineering subject.*



# Degree Courses

## Bachelor of Science in Agriculture — B.Sc. (Agr.)

### Years 2, 3 and 4 — Plant Science

#### Semester III

B200 Cell Biology  
B240 Introduction to Genetics  
B265 Taxonomy of Vascular Plants  
CS220 Introduction to Soil Science  
MP110 Modern Physics

#### Semester V

B300 Principles of Plant Pathology  
B320 General Entomology  
B335 Weed Science  
CS200 Bio-Organic Chemistry  
*Elective*<sup>1</sup>

#### Semester VII

CS425 Land Use Planning or  
Elective\*  
PS415 Crop Adaptation  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

#### Semester IV

B245 Agricultural Genetics or  
EB220 Prod. Economics  
B260 Plant Physiology  
H205 Canadian Literature  
MP200 Statistics  
Crop Production Elective

#### Semester VI

CS320 Soil Fertility and  
Fertilizers  
EB355 Macroeconomics I  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

#### Semester VIII

PS400 Plant Breeding or  
Elective\*  
PS405 Agronomy or  
PS410 Horticulture  
PS450 Seminar and Project  
*Elective*<sup>1</sup>  
*Elective*<sup>1</sup>

\* Students must take CS425 Land Use Planning or PS400 Plant Breeding.

<sup>1</sup>Electives must include one Agricultural Engineering subject.

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# Degree Courses

## Bachelor of Agricultural Engineering — B.E. (Agr.)

The Bachelor of Agricultural Engineering 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 may complete the degree program without interruption at Macdonald College of McGill University or may apply to the Technical University of Nova Scotia or other engineering faculty for the final years.

### Syllabus

#### Year 1

##### Semester I

AE100 Graphics and Projection  
CS100 Chemical Principles  
H200 Technical Writing, and  
English and American Authors  
MP100 Calculus and Analytic  
Geometry II  
MP130 Physics for Life Sciences I

##### Semester II

AE110 Statics  
CS110 Organic Chemistry  
EB110 Economics of Agriculture  
MP105 Calculus and Analytic  
Geometry II  
MP135 Physics for Life Sciences II

##### Spring Session

AE260 Surveying — 2 weeks

#### Year 2

##### Semester III

AE220 Dynamics I  
AE230 Agricultural Mechanization  
CS220 Introduction to Soil Science  
MP220 Computer Science  
MP230 Multivariable Calculus  
PS100 Principles of Crop  
Production

##### Semester IV

AE205 Graphics and Design  
AE225 Dynamics II  
AE235 Agricultural Structures  
AS100 Introductory Animal Science  
MP235 Differential Equations and  
Linear Algebra

#### Year 3

##### Semester V

AE310 Thermodynamics  
AE340 Soil and Water  
MP300 Electric Circuits  
Humanities Elective  
*Elective*<sup>1</sup>

##### Semester VI

AE315 Strength of Materials  
AE350 Fluid Mechanics  
MP200 Statistics  
Humanities Elective  
*Elective*<sup>1</sup>

<sup>1</sup>*One elective must be an Agricultural Engineering subject.*

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# Degree Courses

## Pre-Veterinary Medicine

Students who want 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  
CS100 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  
CS110 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.) program lead to opportunities for graduate studies at the M.Sc. and Ph.D. levels.

# Pre-Tech Semester

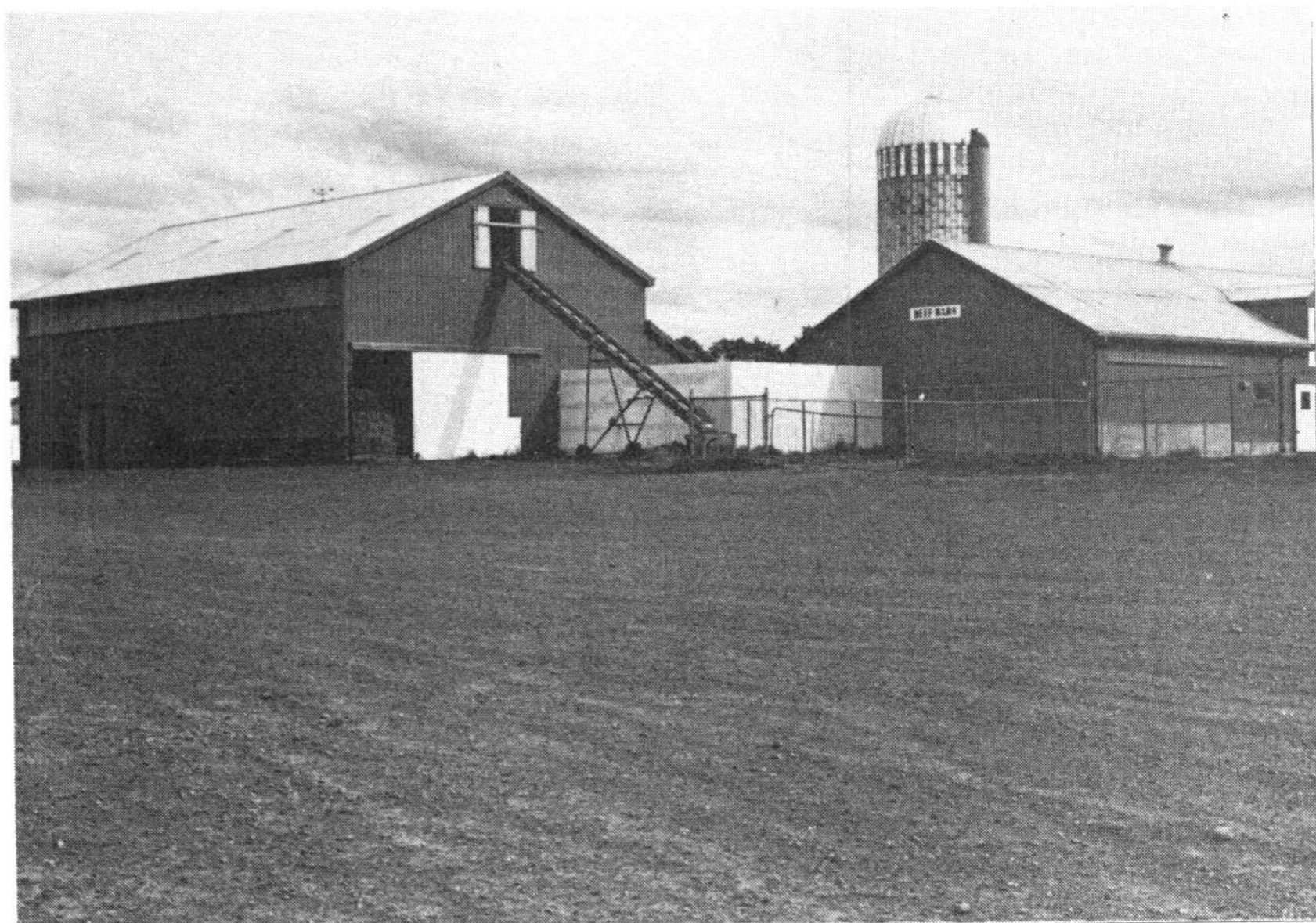
The Nova Scotia Agricultural College offers a program of studies designed to prepare high school graduates for entrance to the Technician courses. Only persons who have been out of school for at least one year will be considered. The period of study will be from early January until late April (see sessional dates for 1984-85 session).

Candidates may be considered who lack entrance requirements in up to three subjects. All applicants with academic admission requirements must present themselves for a selection interview when invited. The following is the syllabus of subjects for the Pre-Tech semester:

MP01 Mathematical Concepts  
CS01 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.



*Beef Cattle Facility, NSAC*

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# 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 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 different academic backgrounds 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.

## 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 who are in good standing will be awarded Technician Diplomas, 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 will be awarded to one who has attained an average of at least 75%.

# Technician Courses

## 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 40%.

Six supplemental exams is the maximum number a student is permitted to write over the duration of any program of study.

Provided that the disqualifying conditions stated above do not apply, a student may write one supplemental examination in a subject in the June supplemental exam period immediately following the failure.

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.

Application for permission to write a supplemental examination in June must be submitted to the Registrar's office before June 7.

The fee for a supplemental examination in any subject is \$20. If a student does not show up 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 \$30 per examination.



*Collins Building, Landscape Horticulture, NSAC*

# Technician Courses

## 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, is required.

### Syllabus

#### Agricultural Business with minor in

##### Animal Science

##### Plant Science

##### Agricultural Mechanization

#### Year I

##### Semester A

CS12 Introduction to  
Soil Science

CS12 Introduction to  
Soil Science

CS12 Introduction to  
Soil Science

CS14 Agr. Chemistry

CS14 Agr. Chemistry

CS14 Agr. Chemistry

EB10 Accounting

EB10 Accounting

EB10 Accounting

EB12 Macroeconomics

EB12 Macroeconomics

EB12 Macroeconomics

H10 Technical Writing

H10 Technical Writing

H10 Technical Writing

PS40 Field Crops I

PS40 Field Crops I

MP15 Physics<sup>3</sup>

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

##### Semester B

CS13 Soil Management

AS30 Animal Science

AE15 Oil Hydraulics<sup>3</sup>

EB11 App. Acct. &  
Taxation

CS13 Soil Management

AS30 Animal Science

EB13 Microeconomics

EB11 App. Acct. &  
Taxation

CS13 Soil Management

EB41 Business Law

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

# Technician Courses

## Syllabus

### Agricultural Business with a minor in

Animal Science

Plant Science

Agricultural  
Mechanization

## Year II

### Semester C

AS34 Animal Nutrition  
B18 Animal Genetics  
B20 Animal Physiology  
EB40 Marketing Practices  
EB43 Business Project  
EB340 Farm Management

B43 Entomology  
EB40 Marketing Practices  
EB43 Business Project  
EB340 Farm Management  
PS53 Vegetable  
Production<sup>2</sup>  
Humanities Subject

AE30 Farm Machinery<sup>3 4</sup>  
EB40 Marketing Practices  
EB43 Business Project  
EB340 Farm Management  
PS40 Field Crops I  
Humanities Subject

### Semester D

AS35 Feeds & Feeding  
AS50 Dairy Production<sup>1</sup>  
AS51 Beef & Sheep Prod.<sup>1</sup>  
EB42 Applied Farm  
Management  
EB220 Production  
Economics  
Humanities Subject

B40 Plant Pathology  
EB41 Business Law  
EB42 Applied Farm  
Management  
EB220 Production  
Economics  
PS49 Potato Production<sup>2</sup>  
PS76 Plant Products  
Physiology

AE34 Farm Tractors<sup>3</sup>  
AE38 Horticulture  
Engineering<sup>5</sup>  
EB41 Business Law  
EB42 Applied Farm  
Management  
EB220 Production  
Economics  
PS41 Field Crops II

<sup>1</sup>May substitute AS52 Swine Production if timetable permits.

<sup>2</sup>May substitute PS43 Small Fruit Crops and PS44 Tree Fruit Crops if timetable permits.

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

<sup>4</sup>May substitute AE14 Surveying if timetable permits.

<sup>5</sup>May substitute 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 pursue 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 pursue 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, is required.



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# Technician Courses

## Agricultural Mechanization

### Syllabus

#### Agricultural Mechanization with minor in

##### Animal Science

##### Plant Science

##### Agricultural Business

#### Year I

##### Semester A

AE12 Drafting

AE12 Drafting

AE12 Drafting

AE13 Shopwork

AE13 Shopwork

AE13 Shopwork

CS12 Introduction to  
Soil Science

CS12 Introduction to  
Soil Science

CS12 Introduction to  
Soil Science

CS14 Agr. Chemistry

CS14 Agr. Chemistry

CS14 Agr. Chemistry

EB10 Accounting

EB10 Accounting

EB10 Accounting

H10 Technical Writing

H10 Technical Writing

H10 Technical Writing

*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

MP14 Computational  
Methods

MP14 Computational  
Methods

MP14 Computational  
Methods

MP15 Physics

MP15 Physics

MP15 Physics

# Technician Courses

## Agricultural Mechanization

### Syllabus

#### Agricultural Mechanization with minor in Animal Science

#### Plant Science

#### Agricultural Business

### 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	EB40 Marketing Practices
B20 Animal Physiology	Production	EB340 Farm Management
	Humanities Subject	

#### Semester D

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

<sup>1</sup>AE38 Horticultural Engineering may be substituted if timetable permits.

<sup>2</sup>Another 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 pursue 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 pursue a one-year program in Agricultural Technology.

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# Technician Courses

## 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, is required.

### Syllabus

#### Animal Science with minor in Agricultural Business

#### Agricultural Mechanization

##### Year I

##### Semester A

AS34 Animal Nutrition  
B18 Animal Genetics  
B20 Animal Physiology  
CS14 Agr. Chemistry  
EB10 Accounting  
H10 Technical Writing

AE12 Drafting<sup>3</sup>  
AS34 Animal Nutrition  
B18 Animal Genetics  
B20 Animal Physiology  
CS14 Agr. Chemistry  
H10 Technical Writing

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

##### Semester B

AS33 Applied Animal Physiology  
AS35 Feeds & Feeding  
AS44 Animal Breeding  
EB11 App. Acct. & Taxation  
Humanities Subject  
MP14 Computational Methods

AS33 Applied Animal Physiology  
AS35 Feeds & Feeding  
AS44 Animal Breeding  
Humanities Subject  
MP14 Computational Methods  
MP15 Physics<sup>3</sup>

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# Technician Courses

## Syllabus

### Animal Science with minor in Agricultural Business

### Agricultural Mechanization

#### Year II

##### Semester C

AS45 Project/Seminar  
AS47 Animal Health  
AS53 Poultry Production<sup>1</sup>  
CS12 Introduction to  
Soil Science  
EB340 Farm Management  
PS40 Field Crops I

AE32 Farm Buildings<sup>3 4</sup>  
AS45 Project/Seminar  
AS47 Animal Health  
AS53 Poultry Production<sup>1</sup>  
CS12 Introduction to  
Soil Science  
PS40 Field Crops I

##### Semester D

AS50 Dairy Production<sup>2</sup>  
AS51 Beef & Sheep Production<sup>2</sup>  
AS52 Swine Production<sup>2</sup>  
CS13 Soil Management  
EB41 Business Law  
PS41 Field Crops II

AE36 Controls & Processing<sup>3 4</sup>  
AS50 Dairy Production<sup>2</sup>  
AS51 Beef and Sheep Production<sup>2</sup>  
AS52 Swine Production<sup>2</sup>  
CS13 Soil Management  
PS41 Field Crops II

<sup>1</sup>May substitute AS55 Fur Production or AS54 Horse Production if timetable permits.

<sup>2</sup>May substitute AS37 Lab Animal Care for one of these if timetable permits.

<sup>3</sup>May substitute MP15 Physics, AE15 Oil Hydraulics, AE34 Farm Tractors, and AE30 Farm Machinery for these four subjects if timetable permits.

<sup>4</sup>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 pursue 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 pursue a one-year program in Agricultural Technology.

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# Technician Courses

## 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 satisfactory completion of the Pre-Tech semester, is required.

### Syllabus

#### Year I

##### Semester A

AE12 Drafting  
AE13 Shopwork  
CS14 Agr. Chemistry  
EB10 Accounting  
H10 Technical Writing  
MP15 Physics

##### Semester B

AE15 Oil Hydraulics  
AE20 Shopwork Practice  
AE27 Welding  
EB11 Applied Acct. & Taxation  
EB41 Business Law  
MP14 Computational Methods

##### Spring Program

AE23 Farm Equipment Dealership -  
6 weeks

#### Year II

##### Semester C

AE30 Farm Machinery  
AE48 Shop Management  
AE49 Electrical Systems  
AE63 Tractor Power  
CS12 Introduction to  
Soil Science  
PS30 Plant Science

##### Semester D

AE47 Project/Seminar  
AE39 Tractor Overhaul  
AE40 Field Equipment  
Overhaul  
AE68 Farmstead Equipment  
Overhaul  
AS30 Animal Science  
Humanities Subject

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# Technician Courses

## 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, is required.

### Syllabus

#### Plant Science with minor in Agricultural Business

#### Horticulture

#### Animal Science

#### Year I

##### Semester A

CS12 Introductory Soils  
CS14 Agr. Chemistry  
EB10 Accounting  
H10 Technical Writing  
MP15 Physics  
PS40 Field Crops I

AE14 Surveying  
CS12 Introductory Soils  
CS14 Agr. Chemistry  
H10 Technical Writing  
MP15 Physics  
PS43 Small Fruit Crops

B43 Entomology  
CS12 Introductory Soils  
CS14 Agr. Chemistry  
H10 Technical Writing  
MP15 Physics  
PS40 Field Crops I

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

##### Semester B

B40 Plant Pathology  
B41 Plant Physiology  
CS13 Soil Management  
MP14 Computational  
Methods  
PS10 Plant Science Skills  
PS41 Field Crops II

B40 Plant Pathology  
B41 Plant Physiology  
CS13 Soil Management  
MP14 Computational  
Methods  
PS10 Plant Science Skills  
PS44 Tree Fruit Crops

AE15 Oil Hydraulics  
B40 Plant Pathology  
B41 Plant Physiology  
CS13 Soil Management  
PS10 Plant Science Skills  
PS41 Field Crops II

# Technician Courses

## Plant Science

### Syllabus

#### Plant Science with minor in Agricultural Business

#### Horticulture

#### Animal Science

### Year II

#### Semester C

B43 Entomology	B43 Entomology	AE30 Farm Machinery
EB12 Macroeconomics	PS39 Greenhouse	AS34 Animal Nutrition
EB340 Farm Management Humanities Subject	Management <sup>2</sup>	B18 Animal Genetics
PS52 Plant Science Project	PS45 Turf Production <sup>2</sup>	B20 Animal Physiology Humanities Subject
PS53 Vegetable Production <sup>2</sup>	PS53 Vegetable Production <sup>2</sup>	PS52 Plant Science Project
	PS60 Landscape Plant Material I <sup>2</sup>	
	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 <sup>4</sup>
EB13 Microeconomics	EB41 Business Law <sup>2 3</sup>	B46 Weed Science
EB41 Business Law	PS46 Turf Production II <sup>2 3</sup>	PS42 Cash Crops and Seed Production
PS49 Potato Production <sup>1</sup>	PS61 Landscape Plant Material II <sup>2 3</sup>	PS49 Potato Production
PS44 Tree Fruit Production <sup>2</sup>	Humanities Subject	PS76 Plant Products Physiology

<sup>1</sup>May substitute PS43 Small Fruit Crops or PS147 Farm Woodlot Management if timetable permits.

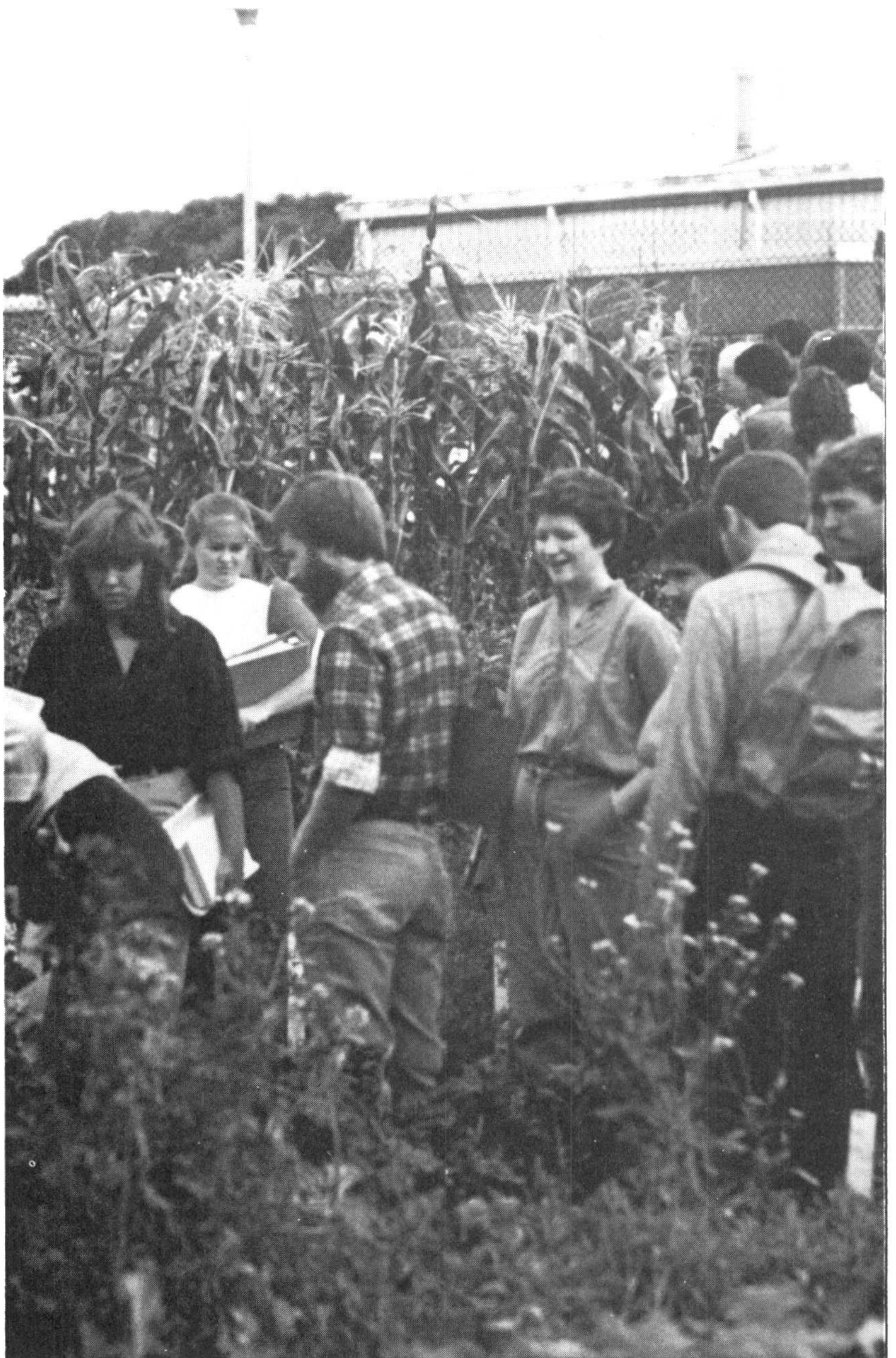
<sup>2</sup>May substitute PS147 Farm Woodlot Management or other Plant Science Production subject if timetable permits.

<sup>3</sup>May substitute PS49 Potato Production, PS76 Plant Products Physiology, or AS30 Animal Science if timetable permits.

<sup>4</sup>May substitute other Animal Science Production subject if timetable permits.

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



*Plant Science Class, College Farm*



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# 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 Biology, a Diploma of Technology (Dipl. T.) in Chemistry, and a Diploma of Technology (Dipl. T.) in Landscape Horticulture.

## **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.

Accepted students are asked to complete and submit medical information on the form provided.

Each candidate must 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 62.

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# Technology Courses for High School Graduates

## 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. 411 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 is required.

### Syllabus

#### Year I

##### Semester A

B50 Microbiology  
B70 Microtechniques I,  
B100 The Plant Kingdom  
CS40 Chemistry Laboratory  
Techniques I  
CS42 Organic Chemistry  
H10 Technical Writing

##### Semester B

B71 Microtechniques II  
B110 The Animal Kingdom  
CS41 Chemistry Laboratory  
Techniques II  
CS43 Bio-Organic Chemistry  
MP70 Basic Statistics  
Humanities Subject

#### Year II

##### Semester C

AS34 Animal Nutrition  
B18 Animal Genetics  
B20 Animal Physiology  
B43 Entomology  
~~B265 Taxonomy of Vascular Plants~~  
CS12 Introduction to Soil Science  
CS77 Instrumentation

##### Semester D

AS37 Laboratory Animal Care  
B40 Plant Pathology  
B41 Plant Physiology  
B42 Biological Techniques  
B46 Weed Science  
MP220 Computer Science

# Technology Courses for High School Graduates

## 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 is required.

### Syllabus

#### Year I

##### Semester A

CS40 Chemistry Laboratory  
Techniques I  
CS42 Organic Chemistry  
CS45 Qualitative Analysis  
CS100 Chemistry (lectures only)  
MP40 Electricity and  
Electrical Measurements  
MP100 Calculus and Analytical  
Geometry I

##### Semester B

CS41 Chemistry Laboratory  
Techniques II  
CS43 Bio-Organic Chemistry  
CS44 Instrumentation I  
CS46 Quantitative Analysis  
MP70 Basic Statistics  
AS100 Introductory Animal Science<sup>1</sup>

#### Year II

##### Semester C

CS70 Instrumentation II  
CS75 Food Chemistry I  
CS79 Project Organization  
CS300 Physical Chemistry  
MP41 Light and Optics  
CS220 Soil Science *or*  
PS100 Principles of Crop  
Production<sup>1</sup>

##### Semester D

CS71 Instrumentation III  
CS73 Laboratory Organization  
and Management  
CS76 Food Chemistry II  
CS80 Project Implementation  
CS310 Radiotracers in  
Agriculture  
MP220 Computer Science

<sup>1</sup>Another suitable Agriculture subject may be substituted if the timetable permits.

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# Technology Courses for High School Graduates

## 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.

### 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 is required.

### Syllabus

#### Year I

##### Semester A

AE12 Drafting  
B265 Taxonomy of Vascular  
Plants  
CS12 Introduction to Soil Science  
PS45 Turf Production I  
PS50 Landscape Horticulture I  
PS55 Nursery Crops  
PS60 Landscape Plant  
Materials I

##### Semester B

AE38 Horticultural Engineering  
B40 Plant Pathology  
B41 Plant Physiology  
CS13 Soil Management  
PS46 Turf Production II  
PS51 Residential Landscape  
Design  
PS61 Landscape Plant  
Materials II

##### Spring Session

PS70 Landscaping Techniques —  
6 weeks

#### Year II

##### Semester C

AE14 Surveying  
B43 Entomology  
EB10 Accounting  
H140 Personnel Management  
PS39 Greenhouse Management  
PS71 Arboriculture  
PS73 Landscape Horticulture II

##### Semester D

B46 Weed Science  
EB11 Applied Accounting  
and Taxation  
EB41 Business Law  
H325 Technology in Agricultural  
Communication  
PS72 Landscape Maintenance  
PS74 Landscape Design and  
Construction

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# 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 person with a NSAC Technician Diploma or with equivalent standing may apply to continue studies in the Technical Program. A combination of courses and projects may be selected to help the student prepare for a chosen field of agricultural endeavour.

The program of study must be developed with the Dean of Vocational and Technical Education. A Technology Project course (AE90, AS90, EB90, or PS90) is to be included and must first be approved by the corresponding department. In doing so, the department will consider the appropriateness and feasibility of the specific project idea, as well as the student's ability to pursue independent project study, based on performance in the previous technician or equivalent programs. Other subjects may include those normally taken by other technical or degree students, providing all subject prerequisites are met.

A Diploma of Technology (Dip.T.) in Agricultural Technology will be awarded to the student who satisfactorily completes twelve approved courses, including a Technology Project course, and who earns an average of at least 60%. A Diploma with honours is awarded if an average of at least 75% is attained and a mark of at least 75% is attained on the Technology project. A Diploma with high honors is awarded if an average of at least 80% is attained and a mark of at least 80% is attained on the Technology project.

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# Technology Courses for Technician Students

## 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 Welding<sup>1</sup>  
AE36 Controls & Processing  
AS100 Animal Science  
EB110 Economics of Agriculture  
MP220 Computer Science  
MP105 Calculus and Analytical  
Geometry II

##### Summer Session

AE260 Surveying — 2 weeks

#### Year II

##### Semester C

AE79 Technology Project  
AE82 Engineering Measurements  
AE230 Agricultural Mechanization  
AE335 Material Handling and  
Processing  
AE340 Soil and Water Engineering  
Approved Elective

##### Semester D

AE80 Technology Report  
AE220 Agricultural Structures  
AE345 Energy in Agriculture  
H325 Technology in Agricultural  
Communications  
MP220 Computer Science  
Approved Elective

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

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# Technology Courses for Technician Students

## 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 studies includes a minimum of three semesters of prescribed courses, four months of approved farm experience, and seven months of on-farm training 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 are required.

### Syllabus

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

### Year I Required Subjects

#### Semester A

AS29 Farm Practices  
CS12 Introduction to Soil  
Science  
CS14 Agricultural Chemistry  
EB10 Accounting  
EB40 Marketing Practices  
EB340 Farm Management I  
PS40 Field Crops I

#### Semester B

AE15 Oil Hydraulics  
AE34 Farm Tractors  
CS12 Soil Management  
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 between 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, and thirteen of the approved electives, and must fulfill the experience requirement.

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# Technology Courses for Technician Students

## Farming Technology

### 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  
B18 Animal Genetics  
B20 Animal Physiology  
B43 Entomology  
PS147 Farm Woodlot Management  
EB12 Macroeconomics  
PS39 Greenhouse Management  
PS43 Small Fruit Crops  
PS53 Vegetable Crops  
Humanities Subject

#### Semester B or D

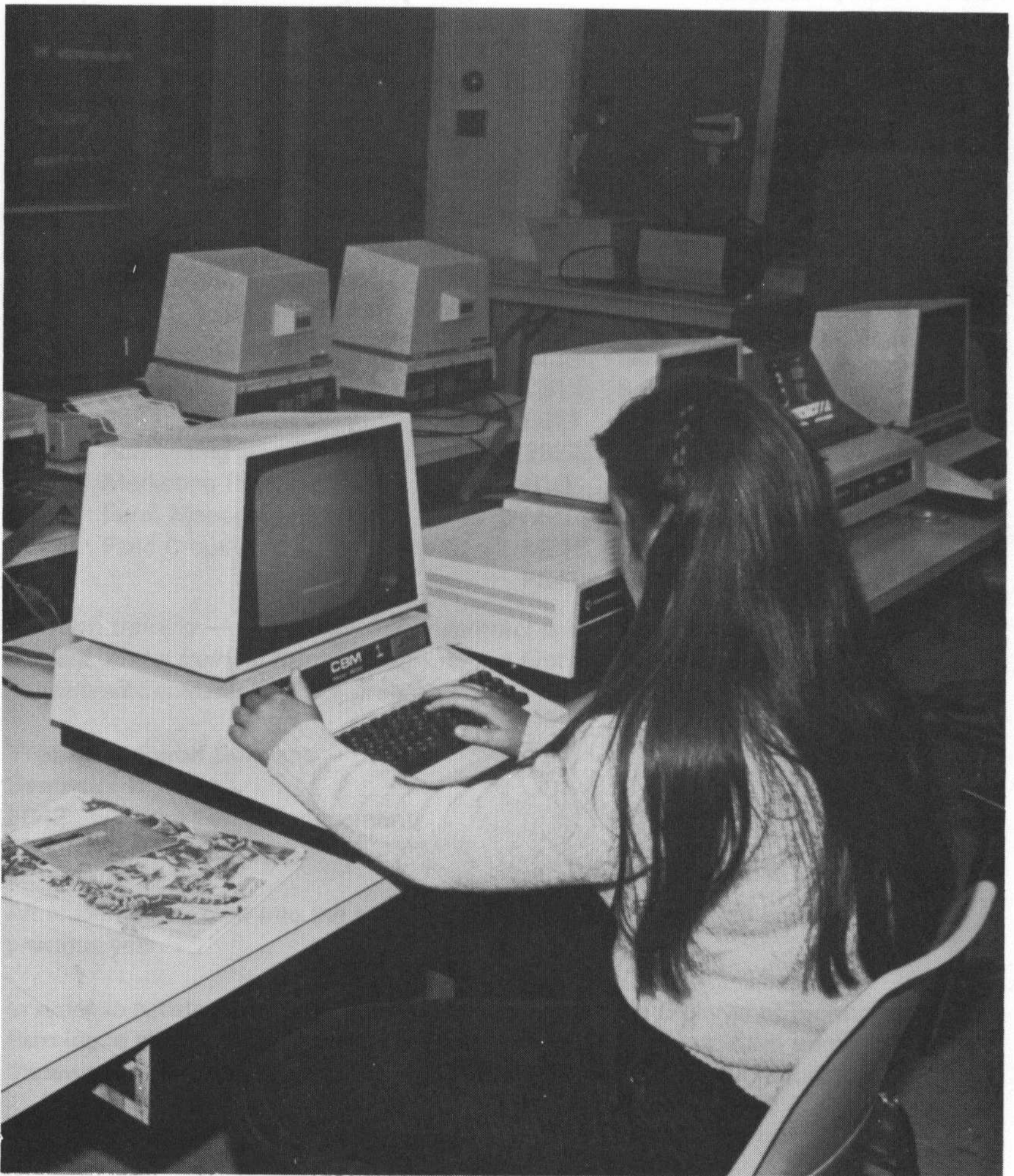
AE20 Shopwork Practices  
AE36 Controls & Processing  
AE38 Horticultural Engineering  
AE45 Soil and Water Management  
AS33 Applied Animal Physiology  
AS35 Feeds & Feeding  
AS44 Animal Breeding  
AS50 Dairy Production  
AS51 Beef & Sheep Production  
AS52 Swine Production  
B40 Plant Pathology  
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



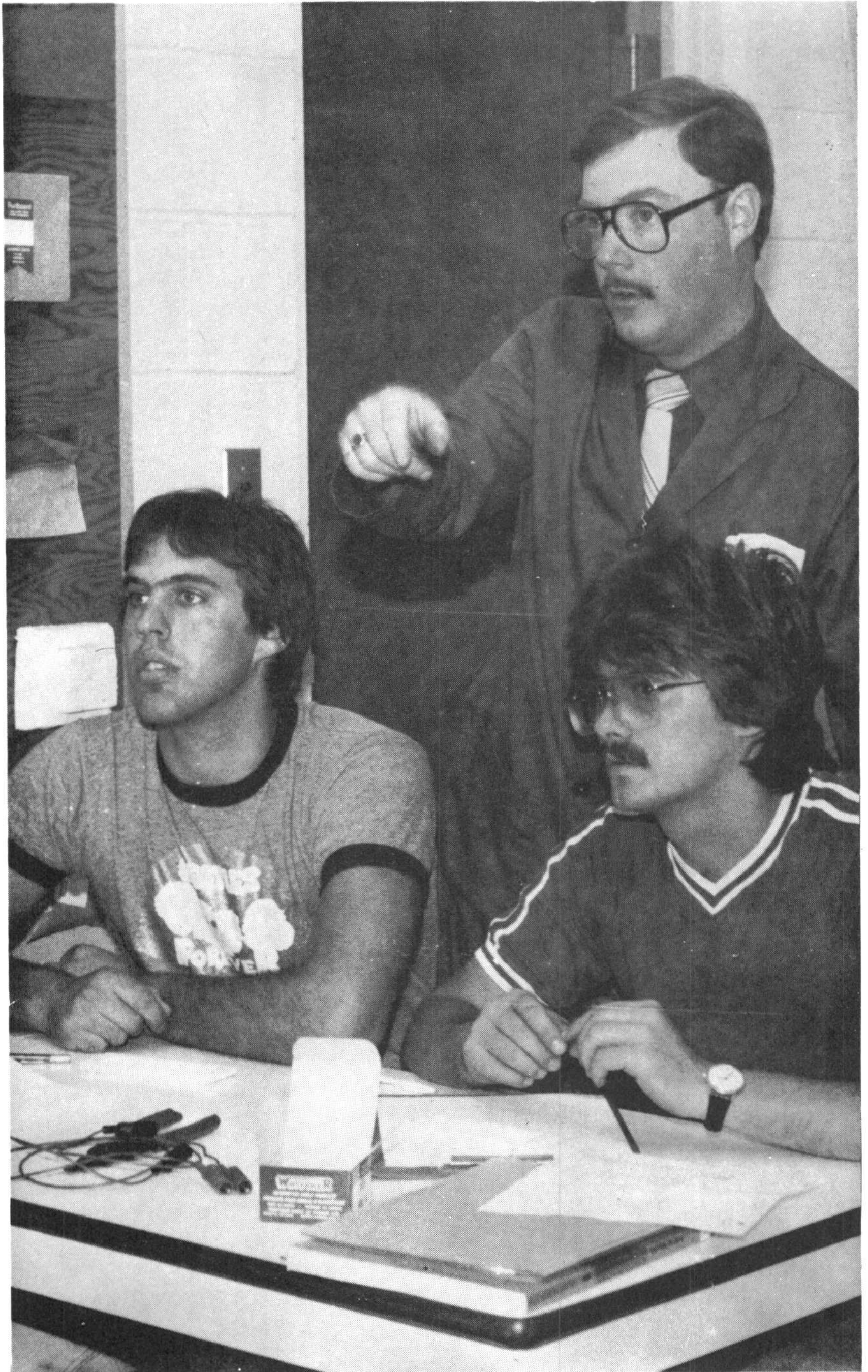
# Qualifications for all Diplomas of Technology

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 will be awarded to one who has attained an average of at least 75%. For a diploma in Agricultural Technology to be awarded, the student's mark in the farm project must also be at or above the minimum average mark required for honours and high honours diplomas.



*Computers in Farm Management Laboratory*



*Agricultural Engineering Class*

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# 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**

Instructor: **Prof. Cunningham**

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, 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, and forming rolls; and of woodworking equipment such as the table saw, jointer, thicknesser, radial arm saw and a wood lathe; 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. Havard**

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 the 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 an emphasis on their application to farm construction projects.

Fall semester — 2 lecs and 4 labs per week.

### **AE 15: Oil Hydraulics**

Instructor: **Prof. Rifai**

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, and repair procedures and standards are introduced.

Winter semester — 3 lecs and 2 labs per week.

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# Agricultural Engineering

## **AE 19: Technical Drawing**

Instructor: **Prof. Cunningham**

*Prerequisite: AE 12*

Includes pictorial drawings and sketches, both architectural and mechanical. Practice is obtained in drawing sections, developing irregular shapes, preparing construction drawings for farm buildings, 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, 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 wood-working 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.

## **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 non-ferrous 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. Desir**

*Prerequisite: AE 15*

Operating principles of the basic types of farm machinery. Tilling, planting, chemical 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.

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## Description of Subjects

### **AE 32: Farm Buildings**

Instructor: **Prof. Allen**

*Prerequisites: AE 12, MP 15*

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. Rifai**

*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.

### **AE 36: Controls and Processing**

Instructor: **Prof. Cunningham**

*Prerequisite: AE 12*

*Preparatory: AE 32*

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. Desir**

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.

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# Agricultural Engineering

## **AE 39: Tractor Overhaul**

Instructor: **Prof. Desir**

*Prerequisite: AE 63*

*Preparatory: AE 20*

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.

Winter semester — 1 lec and 6 labs per week.

## **AE 40: Field Equipment Overhaul**

Instructor: **Prof. Desir**

*Prerequisite: AE 30*

*Preparatory: AE 20*

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

Winter semester — 1 lec and 6 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, irrigations 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**

Coordinator: **Prof. Adams**

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

Winter semester — 1 lec per week and labs to be arranged.

## **AE 48: Shop Management**

Instructor: **Prof. Cunningham**

*Prerequisite: AE 23*

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

Fall semester — 3 lecs and 2 labs per week.

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## Description of Subjects

### **AE 49: Electrical Systems**

Instructor: **Prof. Desir**

*Prerequisite: MP 15*

Basic principles of electricity and electrical circuits are studied. Particular emphasis is placed on the function, description, and principles of operation of tractor electrical systems and components. Methods of diagnosis of faulty systems and components are covered.

Fall semester — 2 lecs and 4 labs per week.

Text — John Deere, *Electrical Systems: Fundamental Services*.

### **AE 63: Tractor Power**

Instructor: **Prof. Desir**

*Prerequisite: MP 15*

*Corequisite: AE 15*

The theory and types 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.

Text — *Tractors: Fundamentals of Machine Operation*.

### **AE 68: Farmstead Equipment Overhaul**

Instructor: **Prof. Cunningham**

*Prerequisite: MP 15*

*Preparatory: AE 20*

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

Winter semester — 1 lec and 6 labs per week.

### **AE 79: Technology Project**

Coordinator: **Prof. Adams**

This project will consist of a comprehensive study of a specific topic of agricultural engineering in which the student is interested or has experience. The project should be technical in nature and may consist of testing, developing, or examining, or an in-depth literature study.

A written synopsis of the proposed project will be presented to the supervising staff member before the project is started.

Fall semester — 1 lec per week and labs to be arranged.

### **AE 80: Technology Report**

Coordinator: **Prof. Adams**

A report on the technology project previously completed will account for the work done and show the knowledge and understanding required. Factual results, observations, and conclusions will be included in a prescribed format. A seminar on the project will be presented when the report is complete.

Winter semester — 1 lec per week and labs to be assigned.

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# Agricultural Engineering

## **AE 82: Engineering Measurements**

Instructor: **To be Announced**

Introduces measurement fundamentals and examines techniques for measuring and controlling pressure, stress, strain, temperature, humidity, etc. Laboratory work will identify agricultural engineering measuring problems, and instrumentation and measurements will be carried out in conditions experienced in agriculture. Various measuring instruments will be used, including computers and microprocessors, for measurement and control applications.

Fall semester — 3 lecs and 3 labs per week.

Text — Moore, *Basic Instrumentation Lecture Notes and Study Guide. Measurement Fundamentals* (2nd edition).

## **AE 90: Technology Project**

Coordinator: **Prof. Adams**

This project provides an opportunity for the students to study in detail an Agricultural Engineering topic of special interest. This must be a new topic, but may build on other aspects of the study program. The student pursues studies under a project supervisor. The project plan developed with the advisor must include the purpose of the study, the procedures and materials used, a time schedule for the work involved, the method in which the information will be collected, the way in which the comparisons and conclusions will be developed, and the format for the final report. Both a written and oral report will be required. The mark is normally reported in the student's final semester, but studies should commence early in the first semester.

Time to be announced.

## **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 — Levens, *Graphics-Analysis and Conceptual Design*.

## **AE 110: Statics**

Instructor: **Prof. Havard**

Deals with forces acting on bodies at rest 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.

Winter semester — 3 lecs and 3 labs per week.

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



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## Description of Subjects

### **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 — Levens, *Graphics-Analysis and Conceptual Design*.

### **AE 220: Dynamics I**

Instructor: **Prof. Rifai**

*Prerequisites: AE 110, MP 105*

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.

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

### **AE 225: Dynamics II**

Instructor: **Prof. Rifai**

*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.

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

### **AE 230: Agricultural Mechanization**

Instructor: **Prof. Rifai**

*Prerequisite: MP 105*

*Preparatory: MP 110 or MP 135*

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.

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

### **AE 235: Agricultural Structures**

Instructor: **Prof. Allen**

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 are considered.

Winter semester — 3 lecs and 3 labs per week.

Text — Whitaker, *Agricultural Buildings and Structure*.

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# Agricultural Engineering

## **AE 260: Surveying**

Instructor: **Prof. Havard**

*Prerequisite: MP 100*

*Preparatory: MP 105*

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.

Two weeks following winter semester.

Text — Kissan, *Surveying Practice*.

## **AE 310: Thermodynamics**

Instructor: **Prof. Havard**

*Prerequisite: MP 135*

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. Allen**

*Prerequisites: AE 110, MP 105*

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, and combined loadings.

Winter semester — 3 lecs and 2 labs per week.

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

## **AE 335: Materials Handling and Processing**

Instructor: **Prof. Cunningham**

*Prerequisite: MP 105*

*Preparatory: MP 110 or MP 135*

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.

Text — Agriculture Canada, *Agricultural Materials Handling Manual*.

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## Description of Subjects

### **AE 340: Soil and Water**

Instructor: **Prof. Havard**

*Prerequisite: MP 105*

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

Fall semester — 3 lecs and 3 labs per week.

Text — Schwab et al. *Soil and Water Conservation Engineering*.

### **AE 345: Energy in Agriculture**

Instructor: **To be announced**

*Prerequisite: MP 105*

*Preparatory: MP 110 or MP 135*

Introduction to the 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.

Winter semester — 3 lecs and 3 labs per week.

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

### **AE 350: Fluid Mechanics**

Instructor: **Prof. Havard**

*Prerequisite: AE 225*

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*.

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# Animal Science

## Animal Science

### **AS 29: Farm Practices**

Coordinator: **Prof. Brennan**

Students are required to develop a basic understanding of, and competence in, tractor operation and other practices, such as:

- ploughing
- welding
- operation and use of a chain saw
- field measurement and yield calculation
- fencing
- milking
- farm animal restraint and handling
- farm production recording
- typing

These abilities may be learned on campus or on approved farms, and a final evaluation of each is recorded. The time for completing this course may be extended to cover 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. Studies the needs of livestock for feeding, housing, and the maintenance of health, and includes an examination of management.

Winter semester — 3 lecs and 2 labs per week.

### **AS 33: Applied Animal Physiology**

Instructors: **Profs. Connor and 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. Emmanuel**

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.

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## Description of Subjects

### **AS 35: Feeds and Feeding**

Instructor: **Prof. Emmanuel**

*Prerequisite: AS 34*

Teaches the basic composition of feeds, the methods of feed formulation, and the use of nutrient requirements tables. Specialized feeding programs are 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, 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. Patterson**

*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 with different farm species.

Winter semester — 3 lecs per week.

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

### **AS 45: Project/Seminar**

Coordinator: **Prof. Mathewson**

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 projects at the beginning of the fall semester.

Winter semester — 2 labs per week.

### **AS 47: Animal Health**

Instructor: **To be announced**

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

Fall semester — 2 lecs and 2 labs per week.

### **AS 50: Dairy Production**

Instructor: **Prof. Cock**

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

Deals with management of dairy animals, 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.

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# Animal Science

## **AS 51: Beef and Sheep Production**

Instructor: **Prof. Mathewson**

*Prerequisites: B 18, B 20, 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, 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 4 labs per week.

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

## **AS 53: Poultry Production**

Instructor: **Prof. Crober**

*Prerequisites: B 18, B 20, 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 4 labs per week.

## **AS 54: Horse Production**

Instructor: **Prof. Forbes**

*Prerequisites: B 18, B 20, 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, 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.

Fall semester — 2 lecs and 2 labs per week (first offered: to be announced).

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## Description of Subjects

### **AS 90: Technology Project**

Coordinator: **Prof. Anderson**

This project provides an opportunity for the students to study in detail an Animal Science topic of special interest. This must be a new topic, but may build on other aspects of the study program. The student pursues studies under a project supervisor. The project plan developed with the advisor must include the purpose of study, the procedures and materials used, a time schedule for the work involved, the method in which the information will be collected, the way in which comparisons and conclusions will be developed, and the format for the final report. Both a written and oral report will be required. The mark is normally reported in the student's final semester, but studies should commence early in the first semester.

Time to be announced.

### **AS 100: Introductory Animal Science**

Instructor: **Prof. Crober**

An introduction to the principles of animal science and commercial animal agriculture. A description of the nature and scale of animal production within the region and beyond is followed by an examination of the relevance of such basic areas of animal biology as physiology, genetics, and nutrition to commercial objectives and practices. Laboratory exercises provide an introduction to the operation and management of the range of animal industries of the region and to selected areas of commercial application of animal science technology.

Winter semester — 3 lecs and 2 labs per week.

### **AS 201: Ruminant Animal Production**

Instructor: **To be announced**

*Prerequisite: AS 100*

A study of the principles and systems of efficient production from ruminant species, with emphasis on dairy, beef, and sheep. This is not a credit course for students majoring in Animal Science. This course is offered in alternate years.

Fall semester — 3 lecs and 2 labs per week.

### **AS 203: Non-Ruminant Animal Production**

Instructor: **To be announced**

*Prerequisite: AS 100*

A study of the principles and systems of efficient production from non-ruminant species, with emphasis on swine, poultry, and horses. This is not a credit course for students majoring in Animal Science. This course is offered in alternate years.

Fall semester — 3 lecs and 2 labs per week (offered in 1985).

### **AS 300: Physiology of Farm Animals**

Instructor: **Prof. Connor**

*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 3 labs per week.

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# Animal Science

## **AS 305: Animal Nutrition**

Instructor: **Prof. Anderson**

*Prerequisite: C 200*

*Preparatory: CS 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 and 2 labs per week.

Text — Lloyd, MacDonald, Crampton, *Fundamentals of Nutrition*.

## **AS 310: Animal Breeding**

Instructor: **Prof. Patterson**

*Prerequisite: B 240*

*Preparatory: MP 200*

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 and 2 labs per week.

## **AS 315: Reproductive Physiology**

Instructor: **Prof. Connor**

*Prerequisite: AS 300*

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

Winter semester — 2 lecs and 2 labs per week.

## **AS 320: Animal Health**

Instructor: **Prof. Long**

*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 — 2 lecs and 2 labs per week.

## **AS 325: Feeds and Feeding**

Instructor: **Prof. Anderson**

*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 — 3 lecs and 2 labs per week.

Text — Church, *Livestock Feeds and Feeding*.



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## Description of Subjects

### **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 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.

### **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.

### **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: to be announced).

### **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, and processing, and consumer acceptance and pricing.

Winter semester — 2 lecs and 2 labs per week.

### **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.

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# Animal Science

## **AS 450: Seminar and Project**

Coordinator: **To be announced**

*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 on 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.

## **Animal Production Courses**

**(AS 400 to AS 430, inclusive)**

Application of the science 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.

Text — Schmidt and Van Vleck, *Principles of Dairy Science*.

## **AS 405: Swine Production**

Instructor: **Prof. Anderson**

Fall semester — 3 lecs and 3 labs per week.

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

## **AS 410: Horse Production**

Instructor: **Prof. Forbes**

Winter semester — 2 lecs and 2 labs per week.

Text — Evans, Borton, Hintz, Van Vleck, *The Horse*.

## **AS 415: Beef Production**

Instructor: **Prof. Mathewson**

Fall semester — 2 lecs and 2 labs per week.

## **AS 420: Sheep Production**

Instructor: **Prof. Mathewson**

Fall semester — 3 lecs and 2 labs per week.

## **AS 425: Poultry Production**

Instructor: **Prof. Crober**

Winter semester — 3 lecs and 3 labs per week.

Text — North, *Commercial Chicken Production Manual*.

## **AS 430: Fur Animal Production**

Instructor: **To be announced**

Winter semester — 2 lecs and 2 labs per week (first offered: to be announced).

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# Description of Subjects

## Biology

### **B 01: Pre-Tech Biology**

Instructors: **Prof. Le Blanc 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, photosynthesis, introductory genetics, and introductory ecology.

Winter semester — 3 lecs and 4 labs per week.

Text — Weisz, Keogh, *Elements of Biology* (4th edition).

### **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 to 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, and the effects of environment on disease development, as well as the safe use and handling of fungicides to control important diseases in the region.

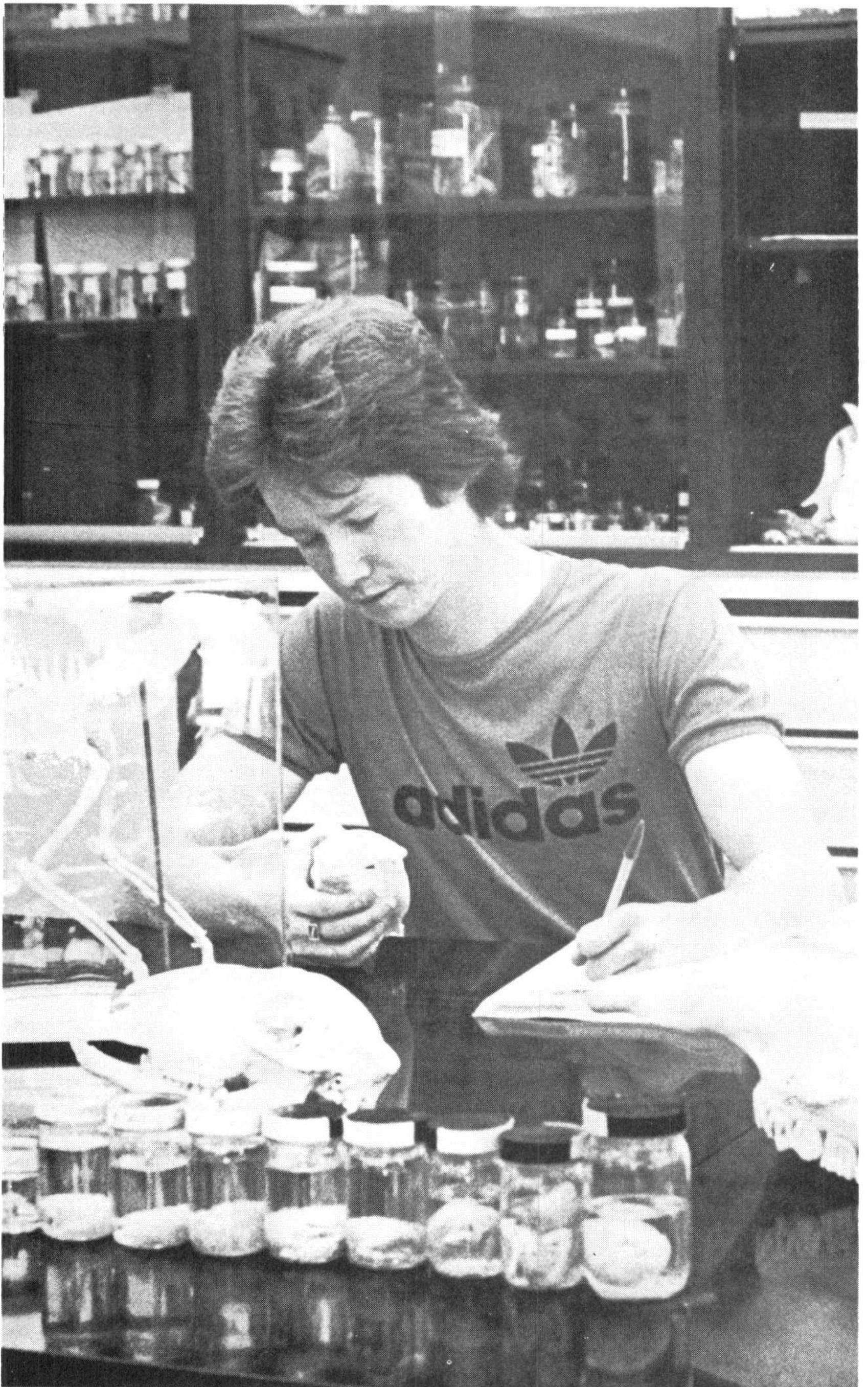
Winter semester — 2 lecs and 3 labs per week.

### **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.



*An Animal Physiology Lab*

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## Description of Subjects

### **B 42: Biological Techniques**

Instructor: **Prof. Eaton**

A practical course dealing with some important techniques commonly encountered in biological science laboratories. Emphasis will be placed upon the following topics: greenhouse techniques (propagation, transplanting, and hydroponics), an introduction to tissue culture, biological photography, and dark-room techniques, and the organization and design of laboratory experiments.

Winter semester — 3 lecs and 3 labs per week.

### **B 43: Entomology**

Instructor: **Prof. Le Blanc**

An introduction to the study of the phylum Arthropoda, with particular reference to the class Hexapoda (Insecta), 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 — 2 lecs and 2 labs per week.

Text — Elzinga, *Fundamentals of Entomology* (2nd edition).

### **B 46: Weed Science**

Instructor: **Prof. Sampson**

Deals with the principles of weed science in relation to agricultural practices in the region. Included are discussions on weed recognition and chemical and non-chemical approaches to controlling weeds in vegetable, fruit, and grain crops, as well as in 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 50: Microbiology**

Instructor: **Prof. Stratton**

An introduction to the science of microbiology. Topics will include microbial classification, isolation, cultivation, and identification, as well as agricultural, industrial, applied, and environmental microbiology. Laboratory work will stress the preparation of microbial media, basic microbiology techniques, and the qualitative and quantitative enumeration of microbes in foods and environmental samples.

Fall semester — 2 lecs and 4 labs per week.

### **B 70: Microtechniques I**

Instructor: **Prof. Crosby**

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

Fall semester — 3 lecs and 4 labs per week.

Text — Knudsen, *Biological Techniques*.

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# Biology

## **B 71: Microtechniques II**

Instructor: **Prof. Crosby**

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 — Brown, *An Introduction to Histotechnology*.

## **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.

## **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, with emphasis placed on the eucaryotic cell. Topics considered include cells and cell growth, molecular constituents of cells, cell metabolism, tools and methods of cell biology, structure and function of major cell organelles, and special cell functions.

Fall semester — 3 lecs per week.

Text — Sheeler and Bianchi, *Cell Biology, Structure, Biochemistry and Function*.

## **B 225: Microbiology**

Instructor: **Prof. Stratton**

*Preparatories: B 100, B 110*

A general introduction to microbiology. Topics include history, morphology, structure, cultivation, reproduction, metabolism, genetics, classification, and control of microorganisms. The importance of microorganisms to soil productivity, foods, industry, veterinary science, public health, and sanitation is discussed. Students are required to have a laboratory coat.

Winter semester — 3 lecs and 3 labs per week.

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## Description of Subjects

### **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.

### **B 245: Agricultural Genetics**

Instructor: **Prof. Padmanathan**

*Prerequisite: B 240*

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

Winter semester — 3 lecs and 2 labs per week.

### **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, and plant orientation, development, and reproduction.

Winter semester — 3 lecs and 3 labs per week.

Text — Bidwell, *Plant Physiology* (2nd edition).

### **B 265: Taxonomy of Vascular Plants**

Instructor: **Prof. Prange**

*Preparatory: B 100 or equivalent*

An introduction to the principles and methods of plant taxonomy with examples taken from the flora of Nova Scotia. Course work includes classification, nomenclature, major families, identification using keys, and field recognition of common species. Students planning to enroll in this course are expected to make a collection of pressed plants during the preceding summer.

Fall semester — 3 lecs and 3 labs per week.

Texts — Roland and Smith, *Flora of Nova Scotia*.  
Smith, *Vascular Plant Families*.

### **B 300: Principles of Plant Pathology**

Instructor: **Prof. Gray**

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

Fall semester — 3 lecs and 3 labs per week.

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

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# Biology

## **B 305: Economic Plant Pathology**

Instructor: **Prof. Gray**

*Prerequisite: B 300*

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 3 labs per week.

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

## **B 310: Mycology**

Instructor: **Prof. Sampson**

*Prerequisite: B 100*

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

Fall semester — 3 lecs and 3 labs per week.

## **B 320: General Entomology**

Instructor: **Prof. Le Blanc**

*Preparatory: B 110*

An introduction to the science of entomology from 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.

Fall semester — 3 lecs and 3 labs per week.

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

## **B 325: Economic Entomology**

Instructor: **Prof. Le Blanc**

*Prerequisite: B 320*

*Preparatory: B 110*

An introduction to the study of economic entomology from an agricultural perspective. Principles of insect control — natural, mechanical, physical, cultural, biological and legal — are covered. Includes chemical and biochemical control, and insecticide development, formulation and application. This course stresses the theory of integrated pest management (IPM).

Winter semester — 3 lecs and 3 labs per week.

## **B 330: Ecology**

Instructor: **Prof. Prange**

*Prerequisites: B 100, B 110*

An introductory course dealing with ecological principles as they relate to individuals, population, 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.*



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## Description of Subjects

### **B 335: Weed Science**

Instructor: **Prof. Sampson**

*Prerequisite: B 100*

*Preparatory: B 260*

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 in 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.

Text — *To be announced.*

### **B 400: Soil Microbiology**

Instructor: **Prof. Stratton**

*Prerequisites: B 225, CS 220*

A study of the biology of the various classes of microorganisms in soil, including bacteria, blue-green algae, fungi, algae, protozoa, 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.

### **B 405: Pesticides in Agriculture**

Coordinator: **Prof. Sampson**

*Preparatories: B 300, B 320, B 335*

A course dealing with various aspects of pesticides used in agriculture. The course will look at pesticides from their origin and development to their registration, sale, distribution, and use. Also included are discussions of pesticide safety and toxicology. Specific topics will be dealt with by guest lecturers.

Winter semester — 3 lecs and 1 discussion period per week.

### **B 449: Seminar and Project**

Coordinator: **Prof. Gray**

A course designed to introduce students in the Plant Protection option to independent research, including data acquisition, analysis, and presentation (written and oral). The research project and faculty advisor is to be chosen, in consultation with the course coordinator, during Semester VI. Other written and seminar topics will be assigned. This course is intended for students in the final year of the option.

Fall semester — 2 lecs and 4 labs per week.

### **B 450: Seminar and Project**

Coordinator: **Prof. Gray**

*Prerequisite: B 449*

A continuation of B 449. Students will continue with their projects and will present a final written report, as well as a conference-style seminar. Other seminar topics and written assignments may be given.

Winter semester — 2 lecs and 4 labs per week.

## Chemistry - Soils

### Chemistry-Soils

#### CS 01: Pre-Tech Chemistry

Instructor: **Prof. Payne**

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 is placed on the use of symbols, formulae, equations, and reactions. Some time is also spent on chemical kinetics, problem solving, solutions and electrolysis, and acid-base reaction.

Winter semester — 3 lecs and 2 labs per week.

Text — Seese and Daub, *In Preparation for College Chemistry* (2nd edition).

#### CS 12: Introduction to Soil Science

Instructor: **Prof. Miller**

Designed to form a basis for the understanding of soil productivity. The physical, chemical, and biological properties of soil are presented, and soil management and land use are discussed. Laboratory periods, using soils from the Atlantic region, are designed to illustrate the lecture material and introduce methods of soil analysis.

Fall semester — 3 lecs and 2 labs per week.

Text — Donahue, Follett, and Tulloch, *Our Soils and Their Management*.



*Chemistry Lab, Cox Institute, NSAC*

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## Description of Subjects

### **CS 13: Soil Management**

Instructor: **Prof. Miller**

*Prerequisite: CS 12*

A study of the chemical, physical, and biological properties of soil as they relate to crop production. Soil fertility and fertilizer use, tillage and water management, and biological husbandry are discussed. Labs take the form of problem-solving tutorials in soil management. After completing CS 12 and CS 13, students should possess the ability to deal with soils on the farm, in agri-business, and in the laboratory.

Winter semester — 3 lecs and 2 labs per week.

Text — Donahue, Follett, and Tulloch, *Our Soils and Their Management*.

### **CS 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* (4th edition).

### **CS 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 and in the potential hazards associated with various pieces of laboratory equipment; also studied are laboratory reports, glass working, responsibilities of a chemistry laboratory worker, and 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*.

### **CS 41: Chemistry Laboratory Techniques II**

Instructors: **Prof. Hawley and Mr. Higgins**

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.

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# Chemistry - Soils

## CS 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, and properties and reactions of various organic compounds discussed.

Fall semester — 3 lecs and 4 labs per week.

Text — Hart and Schuetz, *Organic Chemistry - a Short Course*.  
Laboratory Manual — *Mimeographed procedures*.

## CS 43: Bio-Organic Chemistry

Instructor: **Prof. Payne**

*Prerequisite: CS 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 - a Short Course*.

## CS 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*.

## CS 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-V 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, and buffers.

Fall semester — 3 lecs and 4 labs per week.

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

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## Description of Subjects

### **CS 46: Quantitative Analysis**

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

*Prerequisite: CS 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, *Quantitative Analytical Chemistry* (4th edition).

### **CS 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 spectrography, calorimetry, and potentiometry, including specific ion electrodes and conductivity.

Fall semester — 3 lecs and 4 labs per week.

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

### **CS 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*.

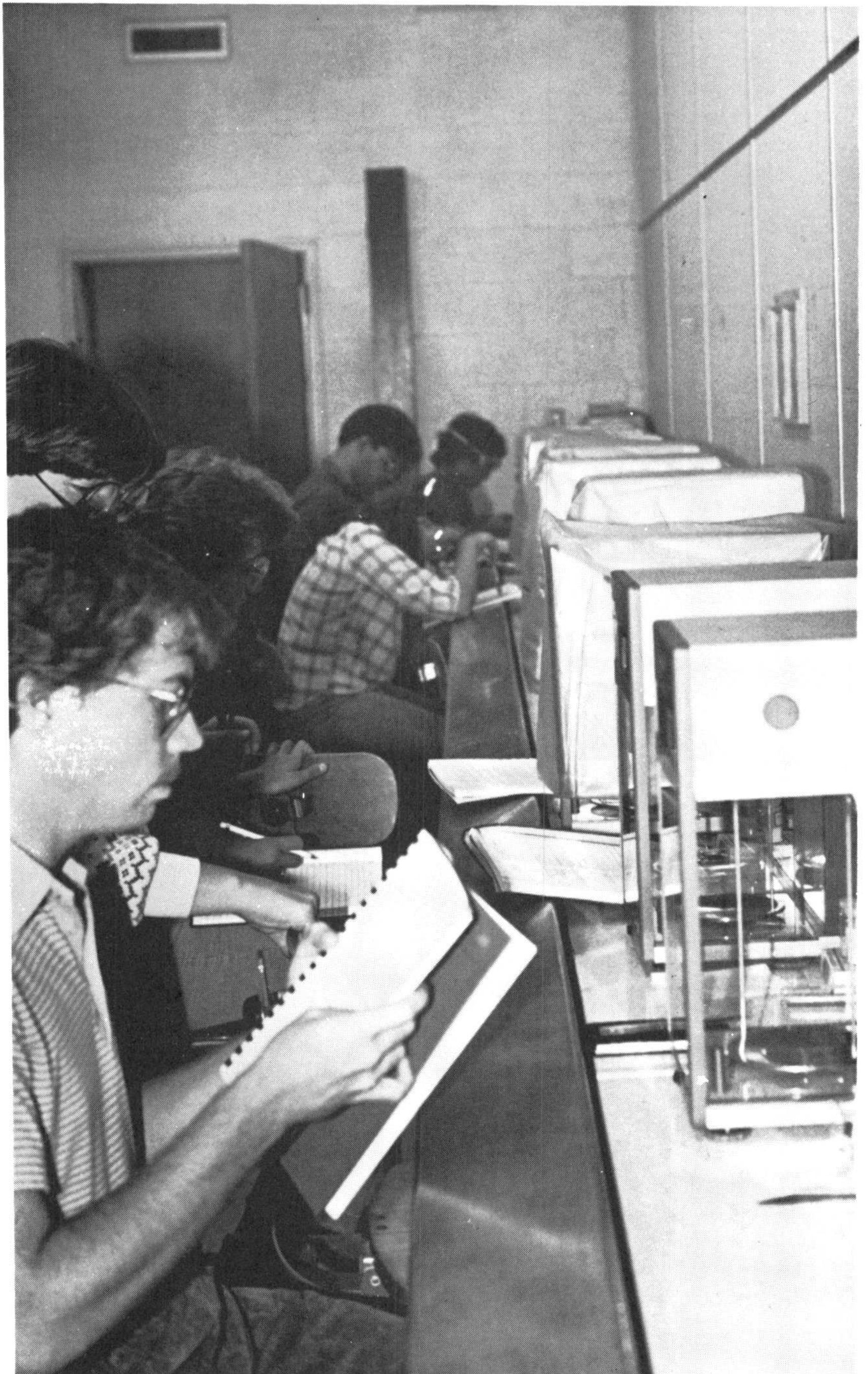
### **CS 73: Laboratory Organization and Management**

Instructor: **Prof. MacLean**

Intended 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 the understanding of 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 - Soils



*Scales Room, Chemistry Lab*

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## Description of Subjects

### **CS 75: Food Chemistry I**

Instructor: **Prof. Robinson**

*Prerequisites: CS 42, CS 43, CS 45, CS 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*.

### **CS 76: Food Chemistry II**

Instructor: **Prof. Robinson**

*Prerequisite: CS 75*

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*.

### **CS 77: Chemistry Instrumentation Techniques**

Instructors: **Profs. MacLean and Robinson**

This is a practical course designed for Biology Laboratory Technology students. Laboratory work will include the manipulation and practical uses of the colorimeter, the autoanalyzer, electrophoresis, TL and GL chromatography, and radioactivity. Lectures will explain the operation and care of these instruments.

Fall semester — 2 lecs and 3 labs per week.

Text — To be announced.

### **CS 79: Project Organization**

Coordinator: **Prof. MacLean**

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

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

### **CS 80: Project Implementation**

Coordinator: **Prof. MacLean**

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

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

### **CS 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 — Mortimer, *Chemistry* (5th edition).

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# Chemistry - Soils

## **CS 110: Organic Chemistry**

Instructor: **Prof. Hawley**

*Prerequisite: CS 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 — Morrison and Boyd, *Organic Chemistry* (4th edition).

## **CS 200: Bio-Organic Chemistry**

Instructor: **Prof. Robinson**

*Prerequisite: CS 110*

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

Fall semester — 3 lecs and 4 labs per week.

Text — Lehninger, *Principles of Biochemistry*.

## **CS 205: Biochemistry**

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

*Prerequisite: CS 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, and metabolism control mechanisms.

Winter semester — 3 lecs and 4 labs per week.

Text — Lehninger, *Principles of Biochemistry*.

## **CS 220: Introduction to Soil Science**

Instructor: **Prof. Warman**

*Prerequisites: CS 100, CS 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 — Donahue, Miller, Shickluma, *Soils—An Introduction to Soils and Plant Growth* (5th edition).



## Description of Subjects

### **CS 300: Physical Chemistry**

Instructor: **Prof. MacConnell**

*Prerequisites: CS 100, MP 100*

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

Fall semester — 3 lecs and 4 labs per week.

Text — Chang, *Physical Chemistry with Applications to Biological Systems* (2nd edition).

### **CS 310: Radiotracers in Agriculture**

Instructor: **Prof. Robinson**

*Prerequisites: CS 200 or CS 43, and 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.

Text — Wang, Willis, Loveland, *Radiotrace Methods in the Biological, Environmental and Physical Sciences*.

### **CS 320: Soil Fertility and Fertilizers**

Instructor: **Prof. Warman**

*Prerequisite: CS 220*

*Preparatory: B 260*

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 and composition, and use of organic and inorganic sources of nutrients.

Winter semester — 3 lecs and 4 labs per week.

Text — Tisdale and Nelson, *Soil Fertility and Fertilizers* (3rd edition).

### **CS 425: Land Use Planning**

Coordinator: **Prof. Miller**

*Prerequisites: CS 220, EB 200 or EB 220*

An interdisciplinary lecture and seminar course on land-use planning. The history, pedology, hydrology, economics, sociology, and politics involved in land-use decisions are discussed. Lecturers from various College departments, the N.S. Department of Agriculture and Marketing, and Agriculture Canada, and guest lecturers, will participate. Field trips are planned for some seminar periods.

Fall semester — 3 lecs and 4 seminar periods per week.

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# Economics and Business

## Economics and Business

### **EB 01: Agricultural Industry**

Coordinator: **Mrs. Crewe**

Major emphasis is placed 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 businesses.

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, and 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 — Lyons, *Canadian Macroeconomics*.

### **EB 13: Microeconomics**

Instructor: **Prof. Surry**

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.

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## Description of Subjects

### **EB 40: Marketing Practices**

Instructor: **Prof. Ells**

Current practices involved in marketing farm products produced in the Atlantic Provinces are studied. The conditions 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.

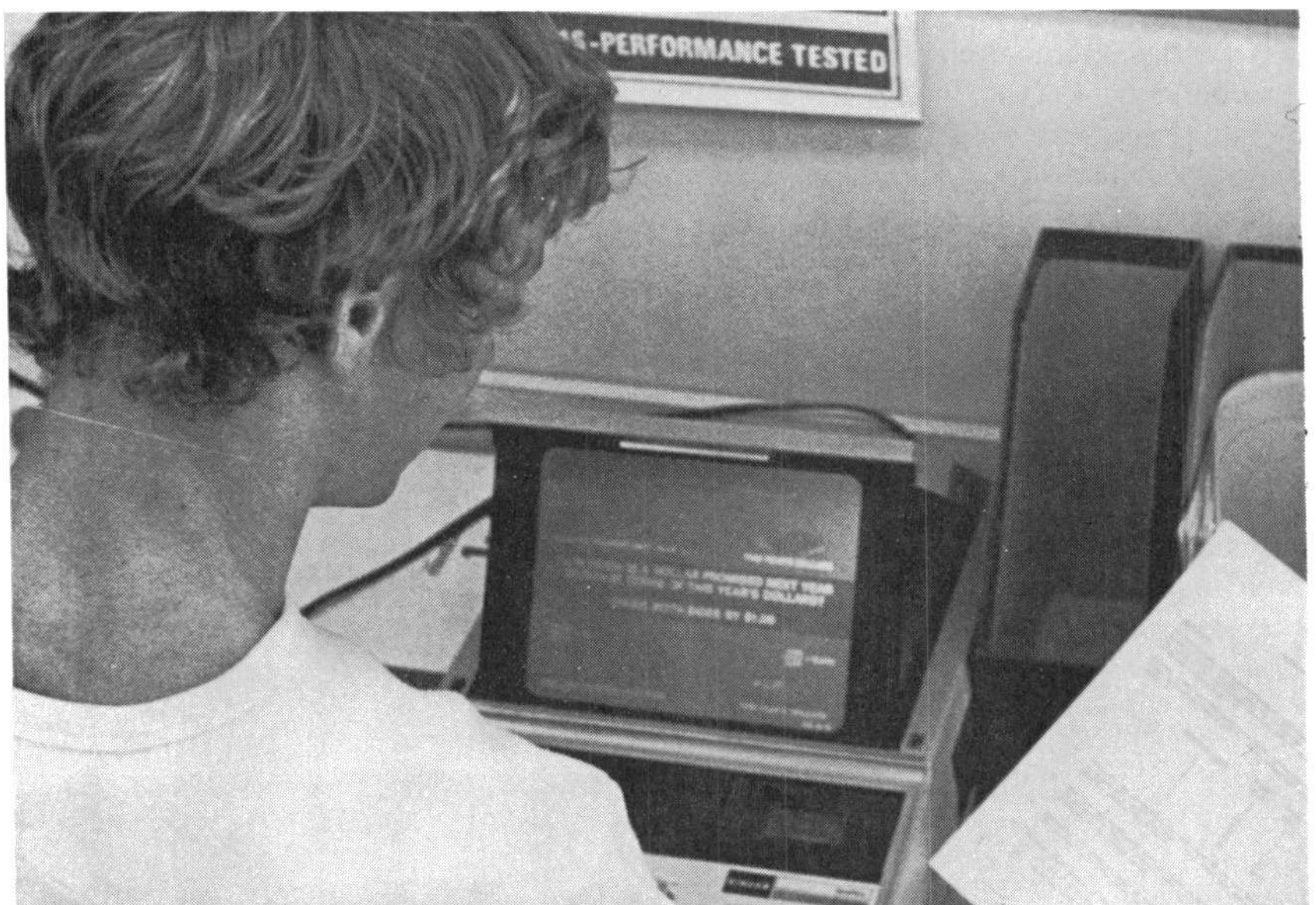
Winter semester — 3 lecs per week.

### **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.



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# Economics and Business

## **EB 43: Business Project**

Coordinator: **Prof. Tait**

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 members of the Economics and Business Department**

The farm project relates the course program to 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 90: Technology Project**

Coordinator: **Prof. Tait**

This project provides an opportunity for the students to study in detail an Economics and Business topic of special interest. This must be a new topic, but may build on other aspects of the study program. The student pursues studies under a project supervisor. The project plan developed with the advisor must include the purpose of the study, the procedures and materials used, a time schedule for the work involved, the method in which the information will be collected, the way in which comparisons and conclusions will be developed, and the format for the final report. Both a written and an oral report will be required. The mark is normally reported in the student's final semester, but studies should commence early in the first semester.

Time to be announced.

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## Description of Subjects

### **EB 110: Principles of Agricultural Economics**

Instructor: **Prof. Stackhouse**

This course is designed to identify the major problems of agriculture at both the regional and national levels. Selected principles of microeconomics and macroeconomics are then developed and used to analyze these problems.

Winter semester — 3 lecs per week.

### **EB 200: Microeconomics I**

Instructor: **Prof. Stackhouse**

*Prerequisite: EB 110*

Introduces the principles of microeconomic theory as applied to the firm. Alternate models of consumer and firm behavior are examined. Areas of emphasis include evaluation of market demand and supply analysis, measurement and interpretation of elasticity, 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.

### **EB 205: Microeconomics II**

Instructor: **Prof. Surry**

*Prerequisites: EB 200, EB 260*

A continuation of the principles presented in Microeconomics I. The course examines firm decisions under conditions of imperfect competition, studies wages, rents, income distribution, and 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 students 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.

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# Economics and Business

## **EB 260: Mathematical Economics**

Instructor: **Prof. Stackhouse**

*Prerequisites: MP 100, EB 110*

Introduction to the frequently used mathematical methods of economic analysis. The course provides the student with the basics required in more advanced economics courses. Areas of concentration include: elements of mathematical economics models, linear models and matrix algebra, applications of calculus to economic problems, and optimization theory.

Winter semester — 3 lecs per week.

## **EB 310: Cost Accounting**

Instructor: **To be announced**

*Prerequisite: 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.

## **EB 325: Operations Research**

Instructor: **Prof. Stackhouse**

*Prerequisite: EB 260*

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

Winter semester — 3 lecs and 2 labs per week.

## **EB 330: Agricultural Market and Price Analysis**

Instructor: **Prof. Surry**

*Prerequisite: EB 205*

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. The course also includes discussion of institutions in the agricultural industry.

Winter semester — 3 lecs per week.

## **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.

Fall semester — 3 lecs per week.

## **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.

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## Description of Subjects

### **EB 355: Macroeconomics I**

Instructor: **Prof. Stackhouse**

An introduction to the study of macroeconomics. 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, and fiscal policy.

Winter semester — 3 lecs per week.

### **EB 360: Econometrics**

Instructor: **Prof. Surry**

*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.

### **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.

### **EB 405: Macroeconomics II**

Instructor: **Prof. Surry**

*Prerequisite: EB 355*

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.

### **EB 415: 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.

Fall semester — 3 lecs per week.

### **EB 420: Agricultural Policy**

Instructor: **Prof. Surry**

*Prerequisites: EB 330, EB 400*

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.

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# Economics and Business

## **EB 425: Research Methods Seminar**

Instructor: **To be announced**

*Prerequisites: EB 325, EB 360*

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.

## **EB 440: Farm Management II**

Instructor: **To be announced**

*Prerequisites: EB 325, EB 340*

An applied course intended to utilize the 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 week.



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# Description of Subjects

## 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. Sanderson**

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

Both semesters — 3 lecs per week.

### **H 12: Leadership Development**

Instructor: **Prof. Sanderson**

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 the 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.

### **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 on 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.

# Humanities

## 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* (5th edition).

## H 125: Sociology II

Instructor: **Prof. MacEachern**

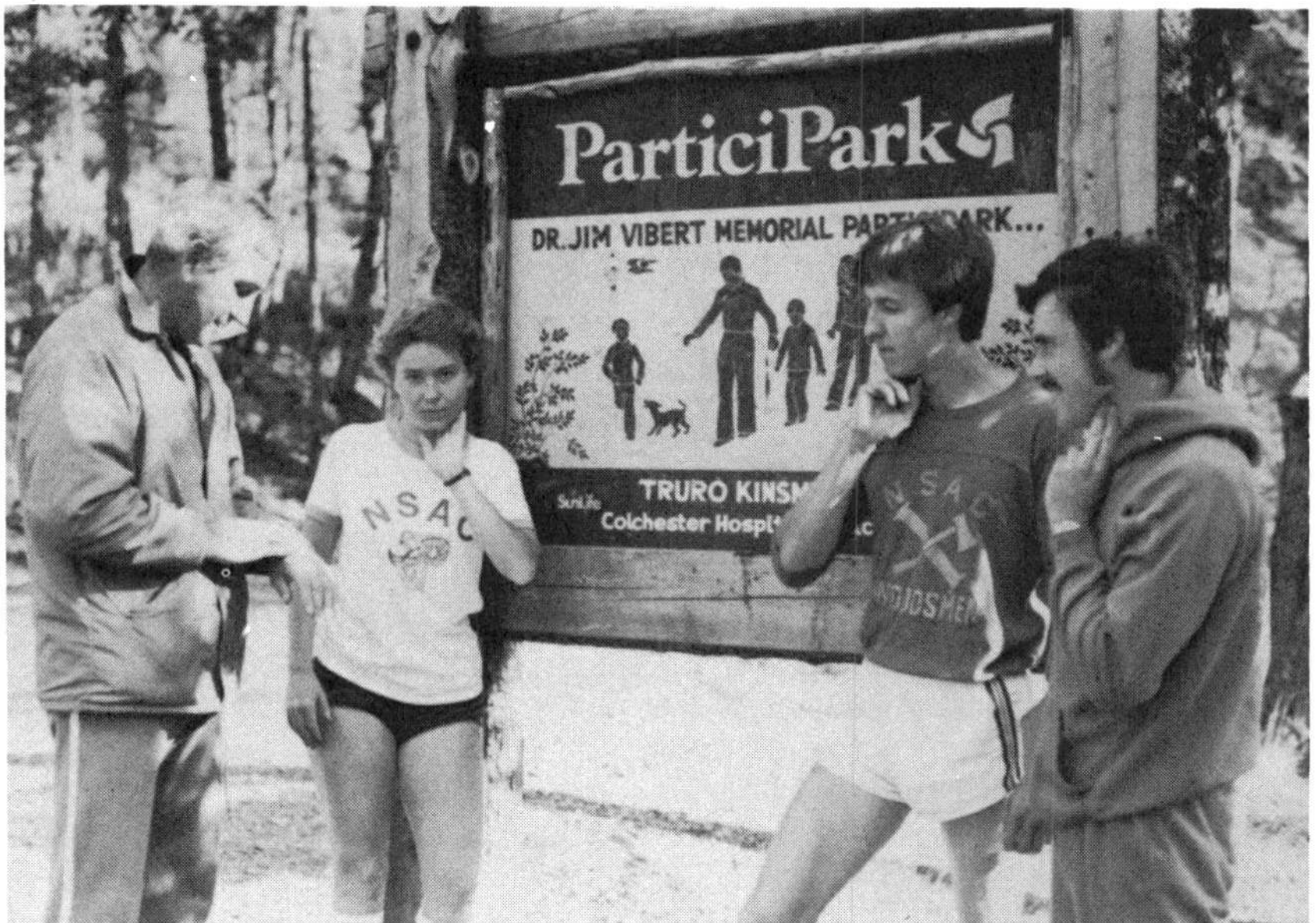
An examination of society with an emphasis on man in community. Special attention is given to an understanding of the self and others, and to family and human values.

Winter semester — 3 lecs per week.

Texts — James & Jongeward, *The People Book*.

James & Jongeward, *Born to Win*.

Streib, *The Changing Family: Adaptation and Diversity*.



*A Human Body and Fitness Lab, in Victoria Park, Truro.*

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## Description of Subjects

### **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 — Kossen, *The Human Side of Organizations*.

### **H 150: Agriculture Today**

Instructor: **To be announced**

*Prerequisites: PS 100, AS 100*

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, in business letter writing, with specific reference to the employment application letter and data sheet, and in 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 section 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.

### **H 220: Introductory French**

Instructor: **Prof. Cipolla**

Designed 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 individual projects. 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*.

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# Humanities

## **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.

## **H 305: Nature and Rural Life**

Instructor: **Prof. Sanger**

The objective of this course is to examine work by some of the naturalists and writers on farming and country life during the last two hundred years. Among those who may be studied are Gilbert White, John Young ("Agricola"), Cobbett, Audubon, Thoreau, Darwin, W.H. Hudson, and Richard Jefferies. Modern writers such as Wendell Berry, Loren Eiseley, and Franklin Russell will also be discussed.

In addition to a final exam, students must either write one major term paper or submit an acceptable journal of natural observations.

Fall semester — 3 seminars per week.

## **H 320: Extension Education in the Rural Community**

Instructor: **Prof. Sanderson**

*Prerequisites: Twenty degree subjects or approval of the instructor.*

The aim of this course is to provide students with a basic understanding of the principles and theories of extension education in rural society. The first part of the course will discuss trends in the rural community which affect the extension education process. Principles and procedures in conducting extension programs will be examined in the second part of the course. Through the utilization of guest lectures and class presentations, past and present extension efforts in the Maritimes will be analyzed in the final section of the course. Students will be required to prepare a major class presentation.

Fall semester — 3 lecs per week.

## **H 325: Technology in Agricultural Communications**

Instructor: **Prof. Sanderson**

*Prerequisites: Twenty degree subjects including H 200, or twelve Technical subjects. Technician students require H 10.*

This course is designed to provide students with an understanding of the basic concepts involved in communicating ideas in an agricultural setting. The adult as a learner is featured in a discussion of the basic concepts involved in planning adult programs. Emphasis is placed on gaining practical experience in the use of media. Various types of media, such as radio, newspapers, television, and film, are examined. Assignments include: preparing advertising or publicity, using photography, and developing scripts. The term project requires the student to produce an audio-visual presentation with integrated sound track.

Winter semester — 2 lecs and 2 labs per week.

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# Description of Subjects

## 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, and 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 — 2 lecs and 2 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.

Both semesters — 3 lecs and 2 labs per week.

Text — Tippens, *Basic Technical Physics*.

### 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 — Belove, *Physics: First Circuits Course for Engineering Technology*.

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# 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, liner regression and correlation, analysis of variance, and discussion of experimental designs.

Fall semester — 3 lecs per week.

Text — *To be announced.*

## **MP 080: Transition Mathematics**

Instructor: **Prof. Saxon**

This is a review of high school mathematics. Topics include manipulation of algebraic expressions, equation solving, linear and quadratic functions, trigonometric functions, graphing, inverse functions and specifically logarithmic and exponential functions, sequences and series. This course will be conducted on a lecture/seminar/tutorial basis.

Fall semester — 4 lecs 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.

Winter semester — 3 lecs and 4 labs per week.

Text — *To be announced.*

## **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, and differentiation of the trigonometric, exponential, and logarithmic functions. Topics from analytic geometry are covered at appropriate stages throughout the course. Students are required to confirm their eligibility for admission to this course by means of a Mathematic Diagnostic Test, to be taken the day following registration. Students not admitted must take MP 080.

Both semesters — 4 lecs per week.

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

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## Description of Subjects

### **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.

Both semesters — 4 lecs per week.

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

### **MP 110: Physics**

Instructor: **Prof. Smith**

A treatment of the conceptual foundations of physical quantities, including kinematics, Newton's Laws, momentum, energy, and the conservation principles. The behaviour of fluids, heat, and thermal transport are also studied.

Fall semester — 3 lecs and 4 labs per week.

Text — Fuller, *Physics, Including Human Applications*.

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

Instructor: **Prof. S. 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 the 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*.

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

Instructor: **Prof. S. Smith**

A continuation of Physics MP 130. The electric charge and field, and 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 studied with relation to the process called radioactivity.

Winter semester — 3 lecs and 4 labs per week.

Text — Kone and Sternheim, *Physics*.

### **MP 200: Statistics**

Instructor: **Prof. Padmanathan**

Descriptive statistics; frequency distributions, probability; normal, standard normal, binomial and chi-square distributions; tests of significance; t and F distributions, simple linear regression and correlation; sampling; planning of experiments; analysis of variance of simple designs; non-parametric tests.

Winter semester — 3 lecs and 1 lab per week.

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# Mathematics and Physics

## **MP 220: Computer Science**

Instructors: **Profs. Madigan and Bishop**

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

The coding is done in FORTRAN in the fall semester, and in BASIC in the winter semester.

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**

*Prerequisites: 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, and eigenvalues.

Winter semester — 4 lecs and 2 labs per week.

## **MP 300: Electric Circuits**

Instructor: **Prof. S. 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.

## **MP 330: Agrometeorology**

Instructor: **To be announced**

*Prerequisites: MP 110 or MP 130*

Introduction to the weather and climate of the Atlantic Region. The course will cover the basics of the surface weather systems, the energy balance of crops, and the factors determining the climate of the region. The final phase will look at how weather information is used to predict crop maturity, yield, disease severity, or insect pest levels.

Winter semester — 3 lecs and 2 labs per week.



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# Description of Subjects

## Plant Science

### **PS 10: Plant Science Skills**

Instructor: **To be announced**

Techniques and skills used in plot seeding, forage harvesting, corn harvesting, yield and dry matter determinations are studied. 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, and the preparation of exhibition materials are also studied. Requires two semesters to complete.

Winter semester — 4 labs per week (2 labs per week in the fall semester).

### **PS 30: Plant Science**

Instructor: **Prof. Bubar**

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: **To be announced**

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**

Instructors: **Profs. Fraser and Caldwell**

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, Stamp, *Principles of Field Crop Production* (3rd edition).

### **PS 41: Field Crops II**

Instructors: **Profs. Fraser and Caldwell**

*Prerequisite: PS 40*

A continuation of PS 40 dealing with the establishment, production management, and 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, Stamp, *Principles of Field Crop Production* (3rd edition).

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# Plant Science

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

Instructors: **Profs. Caldwell and Bubar**

*Prerequisite: PS 40*

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

Winter semester — 3 lecs and 2 labs per week.

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

## **PS 43: Small Fruit Crops**

Instructor: **Prof. Ju**

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

Fall semester — 3 lecs and 2 labs per week.

Text — Shoemaker, *Small Fruit Culture*.

## **PS 44: Tree Fruit Crops**

Instructor: **Prof. Ju**

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.

Text — Teskey, Shoemaker, *Tree Fruit Production*.

## **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*.

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## Description of Subjects

### **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 formulation 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 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, shrub, 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 and Construction**

Instructor: **Prof. Higgins**

*Prerequisites: AE 12, PS 50, PS 60*

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

Winter semester — 3 lecs and 4 labs per week.

Text — Hannebeum, *Landscape Design*.

### **PS 52: Plant Science Project**

Coordinator: **To be announced**

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

Winter semester — Time to be arranged.

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# 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, and 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: **To be announced**

Covers the production of woody, landscape plant materials and herbaceous perennials. More specifically, it covers plant propagation techniques and equipment, nursery culture and equipment, and 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 Materials 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. Sketching will be taught in this course.

Winter semester — 3 lecs per week.

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

## **PS 70: Landscape Techniques**

Instructor: **Prof. Higgins**

This is a spring course in which students learn techniques used in landscape construction and maintenance. Techniques for plant production and marketing are also included.

Spring semester — 6 weeks.

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## Description of Subjects

### **PS 71: Arboriculture**

Instructor: **Prof. Higgins**

*Prerequisite: PS 50*

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 part of this course.

Fall semester — 3 lecs and 4 labs per week.

Text — Harris, *Care of Trees, Shrubs and Vines in the Landscape*.

### **PS 72: Landscape Maintenance**

Instructor: **Prof. Higgins**

*Prerequisite: PS 73*

Deals with landscape maintenance. Emphasis is placed on scheduling horticultural work, on horticultural maintenance equipment, and on 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 and seminars are important components of this course.

Winter semester — 3 lecs per week.

Text — Brown, *The Pruning of Trees, Shrubs and Vines*.

### **PS 73: Landscape Horticulture II**

Instructor: **Prof. Higgins**

*Prerequisites: PS 50, PS 61*

A 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. Special gardening techniques and styles will be examined.

Fall semester — 3 lecs and 4 labs per week.

Text — Buckley, *Canadian Garden Perennials*.

### **PS 74: Landscape Design and Construction**

Instructor: **Prof. Higgins**

*Prerequisite: PS 73*

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 4 labs per week.

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

### **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 on before the end of the fall semester.

Winter semester — 4 labs per week.

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# Plant Science

## **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 90: Technology Project**

Instructor: **Prof. Caldwell**

This project provides an opportunity for the student to study in detail a Plant Science topic of special interest. This must be a new topic, but may build on other aspects of the study program. The student pursues studies under a project supervisor. The project plan developed with the advisor must include the purpose of the study, the procedures and materials used, a time schedule for the work involved, the method in which the information will be collected, the way in which comparisons and conclusions will be developed, and the format for the final report. Both a written and an oral report will be required. The mark is normally reported in the student's final semester, but studies should commence early in the first semester.

Winter semester — Time to be announced.

## **PS 100: Principles of Crop Production**

Instructor: **Prof. Bubar**

This is a prerequisite for all Plant Science production subjects. General principles underlying adaptation, improvement, culture, and utilization of agronomic and horticultural crop plants are studied. 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* (3rd edition).

## **PS 147: 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 procedure and harvesting of saw logs, pulpwood, Christmas trees, fuel wood, and maple sap. Development programs administered by provincial government departments are covered.

Fall semester — 2 lecs and 3 labs per week.

## **PS 300: Forage Crops**

Instructor: **Prof. Fraser**

*Prerequisites: PS 100, B100*

*Preparatories: B 260, B 265*

Study of principal underlying characteristics, tolerances, requirements, uses of forage crops, and the production of forage plants for hay, pasture, silage, haylage, soilage, or cover.

Winter semester — 3 lecs and 2 labs per week.

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## Description of Subjects

### **PS 305: Grain Production**

Instructor: **Prof. Caldwell**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

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

Fall semester — 3 lecs and 2 labs per week.

### **PS 310: Vegetable Crops**

Instructor: **Prof. Haliburton**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

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. This course is offered in alternate years.

Fall semester — 3 lecs and 2 labs per week (offered next in 1985).

### **PS 315: Tree Fruit Crops**

Instructor: **Prof. Ju**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

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. This course is offered in alternate years.

Winter semester — 3 lecs and 2 labs per week (offered next in 1986).

### **PS 320: Small Fruit Crops**

Instructor: **Prof. Ju**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

Principles and practices of small fruit production, history, biosystematics, adaptation, distribution, pest control, breeding of new cultivars, and propagation, storage, and marketing are studied. This course is offered in alternate years.

Fall semester — 3 lecs and 2 labs per week.

### **PS 325: Potato Production**

Instructor: **To be announced**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

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.

Winter semester — 3 lecs and 2 labs per week.

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# Plant Science

## **PS 330: Greenhouse Crop Production and Floriculture**

Instructor: **Prof. Daniels**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

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. This course is offered in alternate years.

Winter semester — 3 lecs and 2 labs per week.

## **PS 335: Landscape Plant Production**

Instructor: **To be announced**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

Production of landscape plant materials is studied in detail. More specifically, this course covers plant propagation techniques, nursery culture and equipment, harvesting, storage, transportation, and garden centre handling and sales of plants.

Fall semester — 3 lecs and 2 labs per week (next offered in 1985).

## **PS 340: Turfgrass Culture and Management**

Instructor: **Prof. Daniels**

*Prerequisites: PS 100, B 100*

*Preparatories: B 260, B 265*

Culture and management of turfgrass. Emphasis is on functional, recreational, and ornamental use of turf and on solving problems in turfgrass production. This course is offered in alternate years.

Fall semester — 3 lecs and 2 labs per week.

## **PS 400: Plant Breeding**

Instructor: **Prof. Bubar**

*Prerequisites: B 240, MP 200, one crop production subject*

*Corequisite: B 245*

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

Winter semester — 3 lecs per week.

## **PS 405: Agronomy**

Instructors: **Prof. Bubar and Agronomy Staff**

Available only to students who have completed all the required subjects in the first semesters, including two agronomic production subjects. The objective is to review and integrate 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.



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## Description of Subjects

### **PS 410: Horticulture**

Instructors: **Prof. Daniels and Horticultural Staff**

Available only to students who have completed all the required subjects in the first 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 horticulturists.

Winter semester — 3 lecs per week.

### **PS 415: Crop Adaptation**

Instructor: **Prof. Fraser**

*Prerequisites: Two crop production subjects*

*Preparatory: B 330*

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.

Fall semester — 3 lecs per week.

### **PS 450: Seminar and Project**

Coordinator: **Prof. Padmanathan**

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. Topics for directed study are selected in the penultimate year. Students are encouraged to work on their topics during the summer before final year and classes commence in the Fall semester.

Winter semester — 1 lec per week.

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# 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 1984-85 year:

Accounting & Taxation (Farm)  
Blueberry Production  
Christmas Tree Production (Basic)  
Dairy Herd Operation  
Draft Horses (Introduction to)  
Farm Skills I  
Farm Skills II  
Farrier (Basic)  
Floral Design  
Fox Production  
Goat Husbandry  
Horse Care Program  
Ironwork  
Landscape Construction  
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

# Vocational Courses

## 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 for 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 \$80 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 Coordinator of Vocational Courses, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3.



*Potato Production Technology for students from many nations.*

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# 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. In recent years, night courses have been offered on Solar Greenhouses, Home Gardening, and Micro-computer Use.

In addition, home study courses were available on Sheep Production, Vegetable Production, and Chain Saw Use. Other courses are currently being developed.

For information on courses offered and costs, write Continuing Education, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3. Telephone 895-1571, Local 300.



*Opening the Agricola Collection, Library, NSAC.*

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# Scholarships and Bursaries

## Entrance Scholarships

### **The Nova Scotia Department of Agriculture and Marketing Scholarships for Students in Degree Programs**

The Nova Scotia Department of Agriculture and Marketing offers entrance scholarships to all residents of Nova Scotia accepted for the degree courses with averages of 80% or higher in the subjects required for admission. These scholarships are at two levels:

#### **\$1500**

Three scholarships of \$1500 each are offered annually to students with the highest averages in the subjects required for entrance. All students who apply for admission before April 1 are considered.

These scholarships are continuous at NSAC for the normal duration of the course. Provided the recipients maintained the 80% level in the work of the previous year with no failed subjects, \$1500 will be offered at the beginning of each academic year. For those whose averages at NSAC drop below 80%, but remain above 75%, the amount of the annual scholarship will be \$500.

#### **\$1000**

Scholarships of \$1000 each are offered to all students (except those selected for the \$1500 level) who are accepted and have averages of 80% or higher in the subjects required for entrance.

These entrance scholarships become continuous for those students who maintain scholarship level at NSAC. For those who maintain an 80% average with no failed subjects, \$1000 is offered each year for the normal duration of the course. For those whose averages at NSAC drop below 80%, but remain above 75%, the amount of the annual scholarship will be \$500.

### **The Nova Scotia Department of Agriculture and Marketing Scholarships for Students in Technical Programs**

The Nova Scotia Department of Agriculture and Marketing offers entrance scholarships of \$200 for all residents of Nova Scotia accepted for the Technical courses with averages in the subjects required for admission of 80% or higher.

These entrance scholarships become continuous for those students who maintain scholarship level at NSAC. For those who maintain an 80% average with no failed subjects, \$200 is offered for students admitted to the second and third years of their programs.

#### **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.

# Scholarships and Bursaries

## Entrance Scholarships

### 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 the second and, if necessary, subsequent years with the highest average (or averages). No application is required. The scholarships are presented at Autumn Assembly.

### Nova Scotia Institute of Agrologists Scholarship

The Nova Scotia Institute of Agrologists has provided a scholarship of \$1000 for a resident of Nova Scotia entering one of the Degree courses at the Nova Scotia Agricultural College. In awarding this scholarship, the selection committee will take into consideration academic standing, participation in school and community activities and financial need. Applicants should write the Registrar, Nova Scotia Institute of Agrologists, NSAC, Truro, N.S., B2N 5E3, 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 1.

### 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.



*Jenkins Hall, NSAC's Dining Facility*

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# Scholarships and Bursaries

## Entrance Scholarships

### 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 or the Registrar's Office, NSAC.

### 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., E3B 5H1. The deadline for applications to be received at this address is August 31.

### 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, on need, and on potential for community leadership and/or co-operative endeavour. Applications should be sent to the Corporate Secretary, Co-op Atlantic, Box 750, Moncton, N.B. E1C 8N5, no later than August 15.

### I.O.D.E. Bursaries

I.O.D.E. Bursaries of \$100 to \$300 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, 1984.

### 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.

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# Scholarships and Bursaries

## Entrance Scholarships

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. No application is necessary.

## 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.



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# Scholarships and Bursaries

## Continuation Scholarships

### **The Nova Scotia Department of Agriculture and Marketing Scholarships for Students in Degree Programs**

The Nova Scotia Department of Agriculture and Marketing offers scholarships for all NSAC students who are residents of Nova Scotia and who are admitted to the second, third, or fourth year of the degree courses with averages in the work of the previous year at NSAC of 75% or higher.

**\$1000** is awarded to all these students with averages in the work of the previous year of 80% or higher and with no failed subjects.

**\$500** is awarded to all these students with averages in the work of the previous year of 75% to 80% and with no failed subjects.

### **The Nova Scotia Department of Agriculture and Marketing Scholarships for Students in Technical Programs**

The Nova Scotia Department of Agriculture and Marketing offers scholarships of \$200 to all NSAC students who are residents of Nova Scotia and who are admitted for their second or third year of the Technical courses with averages in the work of the previous year at NSAC of 80% or higher and with no failed subjects.

### **The Atlantic Fertilizer Institute Scholarship (Degree)**

The Atlantic Fertilizer Institute offers an annual scholarship, valued at \$1000, to a student from one of the Atlantic Provinces who is entering the second year in the Plant Science Option of the B.Sc. (Agr.) course. The student receiving this scholarship must have a farming background. In selecting the recipient, the Scholarship Committee of NSAC will take into consideration: scholastic standing (not necessarily the first priority); participation in student life; contribution to the college community; and financial need. The presentation of this scholarship takes place at Autumn Assembly. Application forms are available at the Registrar's Office, NSAC.

### **The Atlantic Fertilizer Institute Scholarship (Technical)**

The Atlantic Fertilizer Institute offers an annual scholarship, valued at \$500, to a student in the Technician or Farming Technology course who has satisfactorily passed the first academic year and has entered the second year of studies. Only students who intend to farm will be considered. The selection of the recipient by the Scholarship Committee of NSAC will be based upon leadership qualities within the college community, combined with a desirable scholastic standing. The presentation of this scholarship takes place at the Autumn Assembly. Application forms are available from the Registrar's Office, NSAC.

### **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.

# Scholarships and Bursaries

## Continuation Scholarships

### 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 August 1. Application forms are available from the Registrar's Office.

### The Colonel Charles Coll Memorial Scholarship

A scholarship with a value of approximately \$500 is offered by Mr. Harry Coll and heirs, in memory of Colonel Charles H. Coll, to a student from the Maritime Provinces in the final year of an Animal Science option (or program) in a degree or technical course. Candidates are considered on the basis of (1) academic standing, (2) involvement and interest in poultry, and (3) achievement and contribution to 4-H.

The selection of the recipient is made on the recommendation of the Animal Science Department, and the scholarship is awarded at the Autumn Assembly.

### 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 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.



*New Teaching and Research Facilities for 1984-85.*

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# Scholarships and Bursaries

## Continuation Scholarships

### 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.

### The Dorothy Creelman Cox Scholarship

A scholarship with a value of approximately \$200 is offered annually to a female student who successfully completes the first year of the B.Sc. (Agr.) program and enters the Plant Science option. Scholastic standing and contribution to the college community are the important criteria in the selection of the recipient. The selection of the recipient will be made by the NSAC Scholarships Committee on the recommendation of the Plant Science Department.

## Provincial Scholarships: Prince Edward Island

The province of Prince Edward Island offers scholarships to all residents registered in the second year of 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 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 who is admitted to the final year of a Technical Program and 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 courses. 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 an annual scholarship of \$450 to a student of the Pre-Veterinary course at NSAC who is admitted to the Ontario Veterinary College of the University of Guelph or other similar Canadian veterinary college.

The selection of the recipient of this award shall be made by the Veterinary Selection Committee and approved by the New Brunswick Poultry Council. In the event that more than one student possesses otherwise equal qualifications for an annual award, preference shall be given to a student from New Brunswick.

# Scholarships and Bursaries

## Continuation Scholarships

### 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 accrued from a fund established by friends and associates of the late Donald E. Clark in the fields of teaching and industry. 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 Degree 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 years. 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 and on the recommendation of the NSAC Scholarships Committee. The presentation of the scholarship takes place at Autumn Assembly in the final year of the student's program. Application forms are available at the Registrar's Office, NSAC.

### The A.C. Neish Memorial Trust Scholarship

The A.C. Neish Memorial Trust awards a \$1,000 scholarship to a student of the Nova Scotia Agricultural College who completes, in a satisfactory manner, the third year of study. The award is tenable at NSAC for a fourth year of study. The criteria for the selection of the recipient are high academic standing and qualities of leadership as indicated by the participation and achievement in both academic and non-academic activities.

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# Scholarships and Bursaries

## Scholarships for Third- and Fourth-Year Degree Students

### 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 made 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 to 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 averages 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.

### Co-op Atlantic Scholarship

Co-op Atlantic offers a scholarship of \$300 to a student at the Nova Scotia Agricultural College who is from the Maritime Provinces and is entering the third year of the B.Sc.(Agr.) program at NSAC. The scholarship is awarded on the basis of scholastic ability, financial need, and knowledge and appreciation of co-operatives. The award may be tenable for two years. Application forms may be obtained from the Registrar's Office, NSAC. Applications must be submitted to the Registrar by August 1.

### The Vice-Principal's Scholarship

A scholarship is offered each year to a worthy student who has completed three years of the degree program and is enrolled in the fourth year. The selection is to be made by the Vice-Principal of NSAC.

### New Brunswick Poultry Council Scholarship

The New Brunswick Poultry Council offers a scholarship of \$200 to a student in the third or 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. It is awarded on the recommendation of the Animal Science Department.

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# Scholarships and Bursaries

## Scholarships for Third- and Fourth-Year Degree Students

### **Atlantic Provinces Hatchery Federation Scholarship**

The Atlantic Provinces Hatchery Federation offers a scholarship of \$300 to a resident of the Atlantic Provinces who is admitted to the third or fourth year of the B.Sc.(Agr.) program and is enrolled in subjects that make poultry a major area of study. Interested students should write a letter of application to Mr. Herbert Jensen, Secretary, APHF, Agricultural Centre, Kentville, N.S. B4N 1J5.

### **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 varying 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.

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# 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 courses. In determining "highest standing," scholarship and leadership in student activities, in that order, are the deciding factors.

## **Atlantic Provinces Swine Producers' Awards**

The Newfoundland Swine Producers Association, the New Brunswick Pork Producers Association, the Pork Producers Association of Nova Scotia, and Prince Edward Island Quality Swine Incorporated jointly sponsor two awards annually, with a total value of \$1,000, as follows:

**\$400** is awarded to a student in the Technology or Technician program in the graduating class who, through performance in the Swine Production course and in light of other swine-related endeavours, shows the best combination of academic performance and practical swine husbandry ability. The prize is awarded on the recommendation of the Animal Science Department of the College.

**\$600** is awarded to a student in the graduating class of the B.Sc.(Agr.) program in recognition of academic excellence, combined with a genuine interest in the swine industry in Atlantic Canada. Performance in the degree-level swine production course and in other course work associated with swine production is the major consideration in selecting the recipient.

## **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 the first year of Mathematics and Physics at this institution.

## **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.

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## Medals and Prizes

### **Ketchum Manufacturing Company Limited Prize**

The Ketchum Manufacturing Company Limited has provided \$2,000 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 1 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 and who excels in the work of the first year Plant Science Technician course.

### **K. de Geus Memorial Prize for Plant Service**

In memory of the late K. de Geus, 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 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 who has made outstanding achievements. No application is necessary.



# NSAC Enrollment 1984-85

## Courses Leading to B.Sc.(Agr.) or Pre-Vet

### First Year — Class of '87

*Gregory John Arsenault*, 47 Kirkwood Drive, Charlottetown, P.E.I. C1A 2T7  
*Yolande Babineau*, R.R. #4, Box 2, Site 12, Acadieville, N.B. E0A 2T0  
*Stephen Edward Beach*, 43 Duncan Avenue, Kentville, N.S. B4N 1N3  
*Paula Audrey Black*, 48 Gorge Road, Moncton, N.B. E1G 1E6  
*Liesl Bland*, P.O. Box 678, Grand Falls, Nfld. A2A 2K2  
*Penelope Fay Jean Bonang*, Ellershouse, R.R. #1, N.S. B0N 1L0  
*Heather Raylene Bragg*, R.R. #3, Bras d'Or, N.S. B0C 1B0  
*Veronika Mlakar Brandt*, R.R. #1, Merigomish, N.S. B0K 1G0  
*Scott David Bronson*, Site 8, Box 22, Milford Sta., N.S. B0N 1Y0  
*Catherine Christine Chown*, Belleisle Creek, R.R. #1, N.B. E0G 1E0  
*Joseph Ashley Cooper*, R.R. #1, Great Village, N.S. B0M 1L0  
*Jacob John Cox*, R.R. #2, Mabou, N.S. B0E 1X0  
*Roderick Eugene Cumberland*, R.R. #1, Mayfield, St. Stephen, N.B. E3L 2X8  
*Colette Lenore Curran*, 48 3rd Street, Glace Bay, N.S. B1A 4G4  
*Kent Jason Curtis*, 404 Gibson St., Fredericton, N.B. E3A 4E6  
*Lisa Bowe Curwin*, 25 Emery St., Riverview, N.B. E1B 1A8  
*Mary Catherine Daley*, P.O. Box 574, Hampton, N.B. E0G 1Z0  
*Danielle Virginia D'Anjou*, R.R. #2, Inglewood Rd., Westfield, N.B. E0G 3J0  
*Beverly Ann Dawe*, Box 8, Site 1, R.R. #1, Corner Brook, Nfld. A2H 2N2  
*Patrick Ronald Dawson*, P.O. Box 195, Bay Roberts, Nfld. A0A 1G0  
*Brenda Elizabeth Currie Dean*, 151 City Line, Saint John, N.B. E2M 4Z3  
*Mark Gerald DesRoches*, 12 Millbrook Dr., Southport, P.E.I. C1A 7V3  
*Krista Joan Dixon*, 38 Queen Street, St. Stephen, N.B. E3L 2J2  
*Patrick Fred Doohan*, Box 4, Site 24, R.R. #6, Fredericton, N.B. E3B 4X7  
*Joanne Winnifred Driscoll*, Cross Roads, R.R. #1, Charlottetown, P.E.I. C1A 7J6  
*Carl Duivenvoorden*, P.O. Box 60, Jacquet River, N.B. E0B 1T0  
*Jane Wilhelmina Duivenvoorden*, P.O. Box 60 Jacquet River, N.B. E0B 1T0  
*Deanna Sharon Dunn*, R.R. #1, Berwick, N.S. B0P 1E0  
*Gerard Michael Dunphy*, Site 73, Box 6, Torbay Rd., St. John's, Nfld. A1C 5H4  
*Christopher Luke Eyking*, R.R. #1, Bras d'Or, N.S. B0C 1B0  
*Sean Alfred Firth*, R.R. #2, Canning, N.S. B0P 1H0  
*Robert William Foster*, Linden, R.R. #4, Amherst, N.S. B4H 3Y2  
*Alexandra George*, Alder Grange, Cale Crescent, Yarmouth, N.S. B5A 1E2  
*Janice Susan Giles*, 22 Hingley Avenue, Truro, N.S. B2N 3B8  
*Michael David Grimmer*, 2484 Candale St., St. John, N.B. E2J 3A1  
*Anthony David Hall*, P.O. Box 885, New Glasgow, N.S. B2H 5K7  
*April Edena Ingraham*, P.O. Box 69, Milford Sta., N.S. B0N 1Y0  
*John MacKenzie Jardine*, R.R. #3, Chatham, N.B. E1N 3A3  
*Terry Arthur Jones*, P.O. Box 1600, Woodstock, N.B. E0J 2B0  
*Pamela Anne Kirby*, 25 Whitman Ct., Truro, N.S. B2N 3B4  
*Johanna Lynn Kraitzek*, Louisdale, N.S. B0E 1V0  
*Sara Jane Lamond*, 77 South Bentinck St., Sydney, N.S. B1S 2Y8  
*Donald Leonard Langille*, R.R. #2, Hopewell, N.S. B0K 1C0  
*Ralph Joseph LeBlanc*, P.O. Box 262, Nackawic, N.B. E0H 1P0  
*Mary Christina Lecky*, Summerside, R.R. #2, P.E.I., C1N 4J8  
*Cecile LePage*, 226 rue Balmoral, Balmoral, N.B. E0B 1C0  
*Karen Lines*, "Oberon", Point Finger Rd, Paget, Bermuda  
*David Wendell Livingstone*, c/o Mr. Douglas Livingstone, R.R. #2, Danville, Quebec  
JOA 1A0

# NSAC Enrollment 1984-85

## Courses Leading to B.Sc.(Agr.) or Pre-Vet

### First Year — Class of '87

*Michael Hugh Main*, R.R. #1, Maitland, N.S. B0N 1T0  
*Margaret Ann Mann*, P.O. Box 6, Tide Head, N.B. E0K 1K0  
*Myles Allison Morrell*, Aroostook, R.R. #1, N.B. E0J 1B0  
*Jacqueline Marie Morrison*, 226 Brookside St., Glace Bay, N.S. B1A 1L6  
*Jane Elizabeth Morton*, R.R. #1, New Germany, N.S. B0R 1E0  
*Pamela Jill McAllister*, 106 Hammond River Road, Quispamsis, N.B. E0G 2W0  
*Brian Colin MacCulloch*, 341 Branch St., New Glasgow, N.S. B2H 3A5  
*Daniel James MacDonald*, Park St., Inverness, N.S. B0E 1N0  
*Gordon Harvey MacDonald*, Victoria, P.E.I. C0A 2G0  
*Mary Elizabeth MacEachern*, P.O. Box 3115, Charlottetown, P.E.I. C1A 7N9  
*George Douglas Macintosh*, 257 York St., Fredericton, N.B. E3B 3P2  
*Yvonne Marie MacIsaac*, R.R. #3, Georgeville, N.S. B2G 2L1  
*Alan Joseph McLaughlin*, R.R. #5, Perth-Andover, N.B. E0J 1V0  
*Janice Leigh MacLean*, 38 Johnson Ave., Truro, N.S. B2N 4M4  
*Kelly Nardine Mary MacLellan*, R.R. #5, Truro, N.S. B2N 5B3  
*John William MacLeod*, 69 Lake Rd., Glace Bay, N.S. B1A 2H2  
*Peter John MacLeod*, R.R. #1, Deep Brook, N.S. B0S 1J0  
*Michael Richard MacNintch*, 7737 Lemon Tree Lane, Liverpool, New York 13088  
*Andrew Raymond MacPherson*, Birch Grove, N.S. B0A 1A0  
*Seyed Ali Nejat*, c/o Hossein Nejat, 52 St., Apt. #113, Tehran, Iran  
*Fiona Nettleton*, P.O. Box 1212, Truro, N.S. B2N 5H1  
*Ian William Newcombe*, R.R. #2, Centreville, N.S. B0P 1J0  
*Timothy Milton O'Brien*, P.O. Box 69, Tusket, N.S. B0W 3M0  
*Richard Allain Ouellete*, R.R. #5, Ennishore Rd., Grand Falls, N.B. E0J 1M0  
*Gwendolyn Dawn Petherick*, 301 Ayer Avenue, Moncton, N.B. E1C 8W2  
*Clinton William Pinks*, P.O. Box 29, Site 10, R.R. #1, Tantallon, N.S. B0J 3J0  
*Heather Anne Prudence*, P.O. Box 505, Bridgetown, N.S. B0S 1C0  
*Lisa Marie Purcell*, 206 Hill Heights Rd., St. John, N.B. E2K 2H3  
*Nancy Cecilia Rafferty*, 197 North St., Moncton, N.B. E1C 5X9  
*Charonne Dawne Rafuse*, P.O. Box 211, Annapolis Royal, N.S. B0S 1A0  
*Gail Marie Ramsay*, R.R. #2, Black River Bridge, N.B. E0C 1B0  
*Lynda Rankin*, 107 Willow Ave., Fredericton, N.B. E3A 2E2  
*Heather Elizabeth Read*, Berwick, R.R. #2, N.S. B0P 1E0  
*Lee Anne Reeves*, R.R. #3, Sydney, N.S. B1P 6G5  
*John Eric Richard*, 127 Green Acres Drive, Sydney, N.S. B1S 1K5  
*Anita Gail Rodgers*, Upper Loch Lomond, R.R. #5, N.B. E2L 3W5  
*Alexander Kent Rogers*, Coleman, R.R. #1, P.E. I. C0B 1H0  
*Delephina Marie Rogers*, 74 Rigby Rd., Sydney, N.S. B1P 4T6  
*Robert James Saunders*, 76 Walthen Dr., Charlottetown, P.E.I. C1A 4T8  
*A.M. Sadradeh Shoushtari*, 42-A-Fontaine St., Hull, Quebec J8Y 2B6  
*Karen Loreen Sinton*, 75 Aberdeen Ave., Lucas Subdivision, St. John, N.B. E2L 4V5  
*James Sidney Slipp*, R.R. #2, Woodstock, N.B. E0J 2B0  
*Jacqueline Mary Smith*, R.R. #3, Windsor, N.S. B0N 2T0  
*Kimberley Jane Smith*, 24 Kimberley Drive, Truro, N.S. B2N 2Z1  
*Sharon Verna Smith*, 9 Napean St., P.O. Box 914, Port Hawkesbury, N.S. B0E 2V0  
*Arliss Trenholm*, 10 Gerrard St. E., Toronto, Ontario M5B 1G4  
*Bethany Ellen Uttaro*, 21 Harnum Cres., Mt. Pearl, Nfld. A1N 2H3  
*John Herman Van der Linden*, P.O. Box 64, Heatherton, N.S. B0H 1R0  
*Marianne Jean Ward*, R.R. #1, Granville Ferry, N.S. B0S 1K0

# NSAC Enrollment 1984-85

## Courses Leading to B.Sc.(Agr.) or Pre-Vet

### First Year — Class of '87

*Esther Jean Welton*, R.R. #2, Salisbury, N.B. EOA 3E0  
*Karen Ann Williams*, 16 Killarney Rd., Riverview, N.B. E1B 2Z5  
*Dawn Maria Young*, Barachois Brook, Nfld. AON 1B0

### Second Year — Class of '86

*Darlene Ina Acton*, R.R. #2, Sackville, N.B. EOA 3C0  
*Bernice Mae Allison*, 490 King George Highway, Apt. 6, Newcastle, N.B. E1V 2P5  
*Sharon Rose Anderson*, R.R. #2, Sussex, N.B. EOE 1P0  
*Helen Jane Archibald*, R.R. #5, New Glasgow, N.S. B2H 5C8  
*Susan Elaine Archibald*, R.R. #5, New Glasgow, N.S. B2H 5C8  
*Catherine Ann Arsenault*, Box 72, Lakeview Ave., R.R. #4, Sackville, N.S. B4C 3B1  
*Michele Joy Banks*, 950 Millidge Avenue, Saint John, N.B. E2K 2P4  
*Antje Andrea Barczyk*, R.R. #3, Port Elgin, N.B. EOA 2K0  
*Kimberly Anne Barkhouse*, P.O. Box 207, Hubbards, N.S. BOJ 1T0  
*Laurel Gloria Bartlett*, R.R. #2, Wm. George Johnson Rd., Truro, N.S. B2N 5B1  
*David Raymond Bell*, P.O. Box 130, Tatamagouche, N.S. BOK 1V0  
*Kendall Bowness*, Elmsdale, R.R. #2, P.E.I., COB 1K0  
*Kathryn Anne Broadbent*, P.O. Box 1065, Sackville, N.B. EOA 3C0  
*Colleen Buffett*, 8 Maria Street, North Sydney, N.S. B2A 2M5  
*Allan Vernon Weldon Brown*, Southampton, R.R. #1, N.S. BOM 1W0  
*Colleen Elaine Cameron*, c/o Mr. George Wm. Meekins, R.R. #3, Truro, N.S. B2N 5B2  
*John Paul Cant*, P.O. Box 1482, Sackville, N.B. EOA 3C0  
*Sean Wesley Carson*, R.R. #1, Sydney Forks, N.S. BOA 1W0  
*Cheryl Marlene Carter*, 376 Hampton Road, Quispamsis, N.B. EOG 2W0  
*Jane Patricia Charbonneau*, 40 Andrew St., Campbellton, N.B. E3B 2B5  
*Alyson Denise Chisholm*, 613 Dysart St., Dieppe, N.B. E1A 5M9  
*Graham Stewart Cook*, 95 Smith Avenue, Truro, N.S. B2N 1C6  
*Melania Lynn Cornish*, Main Street, Trenton, N.S. BOK 1X0  
*Gregg Carl Cunningham*, 72 Guysborough Ave., Dartmouth, N.S. B2W 1S7  
*Barbara Jean Daniels*, 18½ Chestnut Lane, Dartmouth, N.S. B2Y 3Y2  
*John Myers DeLong*, 116 Athabaska Ave., Riverview, N.B. E1B 2T1  
*Juanita Florence Diamond*, Winsloe, R.R. #1, P.E.I. COA 2H0  
*Carl Edward Dingee*, Glassville, R.R. #2, N.B. EOJ 1L0  
*Deborah Douglas*, Tyne Valley, R.R. #1, P.E.I. COB 2C0  
*Susan Lynne Fitch*, R.R. #6, Kingston, N.S. BOP 1R0  
*Timothy David Flemming*, Meagher's Grant, N.S. BON 1V0  
*Loralie Freeman*, P.O. Box 190, Inverness, N.S. BOE 1N0

# NSAC Enrollment 1984-85

## Courses Leading to B.Sc.(Agr.) or Pre-Vet

### Second Year — Class of '86

*Daniel Peter Gallagher*, P.O. Box 85, Minto, N.B. E0E 1J0  
*Sandra Lynn Gamble*, Alexandra, R.R. #1, Charlottetown, P.E.I. C1A 7J6  
*Kimberly Lorretta Gardiner*, 3570 Plummer Ave., New Waterford, N.S. B1H 2A1  
*Diane Geneve Gardiner*, 20 Dominion Street, Truro, N.S. B2N 3N8  
*Paula Marie Grezel*, 76 Green Acres Dr., Sydney River, N.S. B1S 1K6  
*Elizabeth Margaret Hale*, 201 Clark St., Summerside, P.E.I. C1N 2J4  
*Christopher Gerard Hennessey*, 165 North River Road, Charlottetown, P.E.I. C1A 3L2  
*Paul Allan Holt*, R.R. #1, Port Williams, N.S. BOP 1T0  
*James Stewart Keen*, R.R. #1, Crapaud, P.E.I. COA 1J0  
*Graham Collins Kempton*, P.O. Box 91, Port Williams, N.S. BOP 1T0  
*Gerry Leonard Kennie*, R.R. #3, Wolfville, N.S. BOP 1X0  
*Nancy Joyce Kent*, R.R. #1, Truro, N.S. B2N 5A9  
*David Ross Landry*, 119 Spruce Drive, Truro, N.S. B2N 5H6  
*Darlene Eva LeBlanc*, Box 6, R.R. #2, D'Escousse, N.S. BOE 1K0  
*Serge Joseph LeBlanc*, 146 Rue Eglise, St. Antoine, N.B. E0A 2X0  
*Gilberte Marie Leger*, R.R. #1, Site 30, Box 7, Cap-Pele, N.B. E0A 1J0  
*Debbi Lorraine Levy*, 17 Western Ave. Parrsboro, N.S. B0M 1S0  
*Larry Hardy Lutz*, Berwick, R.R. #1, N.S. BOP 1E0  
*Thomas Jack Mailman*, R.R. #1, Bridgewater, N.S. B4V 2V9  
*John Paul Mitchell*, 34 Pattillo Ave., Truro, N.S. B2N 1K6  
*Crystal Elaine Mullen*, R.R. #2, P.O. Box 57½, Weymouth, N.S. B0W 3T0  
*Catherine Ellen MacKinnon*, 33 Pine Hill Road, Dartmouth, N.S. B3A 2G2  
*Jessica M. Macnab*, Belle River Post Office, P.E.I.  
*Sandra Marie MacNeil*, 1 Bay Street, Antigonish, N.S. B2G 2G4  
*Alexander James MacQuarrie*, Cornwall, R.R. #2, P.E.I. COA 1H0  
*Robert Craig Newcombe*, Port Williams, N.S. BOP 1T0  
*William Lloyd Parsons*, 592 Queen Mary Street, Ottawa, Ontario K1K 1W1  
*Gloria Anne Penny*, Charlottetown, R.R. #1, P.E.I. C1A 7J6  
*Daniel Kevin Phinney*, R.R. #4, Bridgetown, N.S. BOS 1C0  
*Harlene Donna Pick*, Upper Rawdon, R.R. #1, N.S. BON 2N0  
*Constance Angela Priest*, Box 2, Belmont, N.S. B0M 1C0  
*Marsha Mae Purdy*, R.R. #1, Brookfield, N.S. BON 1C0  
*Shelley Diane Roode*, R.R. #6, Truro, N.S. B2N 5B4  
*Joanne Elizabeth Rutledge*, 1215 Johnson Ave., Bathurst, N.B. E2A 3T4  
*Charles Francis Smith*, 480 Pictou Road, Truro, N.S. B2N 2V1  
*Michael Russell Steen*, 17 Orkney Drive, Dartmouth, N.S. B2X 1K1  
*Rebecca Anne Steeves*, P.O. Box 982, Woodstock, N.B. EOJ 1B2  
*Jean Michal Stevens*, Box 221, Hampton, N.B. EOG 1Z0  
*Phyllis Annette Marie Tarrant*, R.R. #5, Glenn Road, Antigonish, N.S. B2G 2L3  
*Claudette Theresa Theriault*, Box 196, Arichat, N.S. BOE 1A0  
*Bruce Leonard Thomson*, R.R. #5, West River, Antigonish, N.S. B2G 2L3  
*Cynthia Anne Van Alstyne*, 28 Churchill Drive, Sydney, N.S. B1S 2B1  
*Andrew Gerald Van Kessel*, R.R. #1, New Glasgow, N.S. B2H 5C4  
*Susan Kathleen Vermeir*, R.R. #1, Gaspereaux Lake, N.S. B2G 2K8  
*Catherine Marie Warren*, P.O. Box 269, Trenton, N.S. B0K 1X0

# NSAC Enrollment 1984-85

## Courses Leading to B.Sc.(Agr.) or Pre-Vet

### Third Year — Class of '85

*Esben Earle Arnfast*, 57 Pictou Road, Truro, N.S. B2N 2R9  
*Ronda Ruth Bellefontaine*, R.R. #2, Middle Musquodoboit, N.S. B0N 1X0  
*Peter Thomas Brown*, R.R. #6, St. Stephen, N.B. E3L 2Y3  
*Julianne Elizabeth Burton*, R.R. #2, Berwick, N.S. B0P 1E0  
*Jeffrey Damon Carter*, Staples Brook Rd., Debert, N.S. B0M 1G0  
*Donald Ralph Christie*, 17½ Lyman St., Truro, N.S. B2N 4R9  
*Blair Campbell Clark*, Cavendish, R.R. #1, P.E.I., COA 1N0  
*Sandra Ann Coleman*, P.O. Box 873, Greenwood, N.S. B0P 1N0  
*Carmen Comeau*, P.O. Box 195, Weymouth, N.S. B0W 3T0  
*Donald Joseph Cooper*, Box 4, Cleveland, N.S. B0E 1J0  
*Marcel Joseph Dawson*, 572 Harold St., Dieppe, N.B. E1A 1Z1  
*Sylvia Lynn DeChamp*, R.R. #1, Glen Drive, St. Eleanors, P.E.I. C1N 4J8  
*Timothy Shawn Delaney*, 7 Walters Street, Dartmouth, N.S. B2W 1S9  
*Ruth Marlain DeMone*, Clearview East, R.R. #1, Charlottetown, P.E.I. C1A 7J6  
*Diane Marion Dunlop*, 14 Archibald St., Truro, N.S. B2N 4R4  
*John Ralph Earle*, 59 Bennett Drive, Gander, Nfld. A1V 1N1  
*Margaret Noreen Ells*, R.R. #5, Canning, N.S. B0P 1H0  
*Pamela Ann Grace*, 414 Old Sackville Rd., Lr. Sackville, N.S. B4C 2J9  
*Charles Isaac Gallagher*, 2 McLellan Street, Truro, N.S. B2N 2L1  
*Margaret Ellen Hope-Simpson*, P.O. Box 486, Wolfville, N.S. B0P 1X0  
*James Lyle Stuart Johnson*, P.O. Box 283, Sydney, N.S. B1P 6H1  
*Gregory Stephen Jones*, 22 Pauline Cres., Dartmouth, N.S. B2W 2A6  
*Irene Michele Joostema*, R.R. #6, Kensington, P.E.I. COB 1M0  
*Andrew John Kelly*, Mt. Stewart, R.R. #3, P.E.I. COA 1T0  
*Ann Marie Langille*, 56 Elm St., Springhill, N.S. B0M 1X0  
*Margot Joan Lownds*, 12 Ross St., Halifax, N.S. B3M 2A5  
*Randall Wade Murphy*, R.R. #1, Scotch Village, N.S. B0N 2G0  
*Kevin Vernon McCully*, Great Village, N.S. B0M 1L0  
*John Ronald MacDonald*, P.O. Box 1481, Antigonish, N.S. B2G 2L7  
*Darrell Estwood McIsaac*, R.R. #1, Stickney, N.B. EOJ 1X0  
*Janice Lee McKenzie*, R.R. #2, Truro, N.S. B2N 5B1  
*Andrew Findlay MacRae*, P.O. Box 1426, 52 Kent Ave., Wolfville, N.S. B0P 1X0  
*Leonard Harris North*, P.O. Box 261, Canning, N.S. B0P 1H0  
*Fern Louise Patterson*, R.R. #1, Walton, N.S. B0N 2R0  
*Heidi Elizabeth Patterson*, 321 McAllister Ave., Riverview, N.B. E1B 1T9  
*Kevin Ralph Patterson*, P.O. Box 955, Wentworth Road, Windsor, N.S. B0N 2T0  
*Laurene Theresa Power*, Charlottetown, R.R. #5, P.E.I. C1A 7J8  
*Merridy Anne Robinson*, P.O. Box 158, Stewiacke, N.S. B0N 2J0  
*Karen Marie Ryan*, Flat River, P.E.I. COA 1B0  
*Michael Christopher Schaad*, R.R. #1, Tatamagouche, N.S. B0K 1V0  
*Shari Elizabeth Schurman*, Summerside, R.R. #3, P.E.I. C1N 4J9  
*John Anthony Sipos*, P.O. Box 471, Waverley, N.S. B0N 2S0  
*Peter MacPhail Smith*, 37 Pine Drive, Sherwood, P.E.I. C1A 6R6  
*Constance Elizabeth Starratt*, 30 Windale Dr., Truro, N.S. B2N 2X5  
*Darlene Marie Stevenson*, P.O. Box 1155, Middleton, N.S. B0S 1P0  
*Peter William Swetnam*, R.R. #2, Centreville, N.S. B0P 1J0  
*Margareta Veronica van de Riet*, R.R. #1, Shubenacadie, N.S. B0N 2H0  
*Elizabeth Ann Wardrop*, 121 Berkley Ave., St. Lambert, Quebec H4P 3C9  
*Heather Anne Wilson*, 6 Beechwood Terrace, Halifax, N.S. B3M 2C2

# NSAC Enrollment 1984-85

## Courses Leading to B.E.(Agr.)

### First Year — Class of '86

*Frederick Bonar Brown*, Glassville, N.B. EOJ 1L0

*Jeffrey Scott Estabrooks*, Lr. Fairfield Road, P.O. Box 1095, Sackville, N.B. E0A 3C0

*Raymond John Frizzell*, R.R. #6, Truro, N.S. B2N 5B4

*John David Hart*, Port Hawkesbury, N.S. B0E 2V0

*Sheldon Scott Howatt*, Tyron, R.R. #1, P.E.I. COB 1A0

*David LaVerne Parrish*, Waterville, R.R. #1, N.S. B0P 1V0

*Michael Todd Smith*, R.R. #6, Truro, N.S. B2N 5B4

*Ward Nolan Smith*, P.O. Box 4, Florenceville, N.B. EOJ 1K0

*Robert Gordon Trenholm*, 48 Pasadena Cres., Apt. 305, St. John's, Nfld. A1E 4S2

### Second Year — Class of '85

*Robert Leslie Chambers*, P.O. Box 53, Lawrencetown, N.S. B0S 1M0

*Paul Glenford Gilbert*, R.R. #1, Springhill, N.S. B0M 1X0

*Wilfred Norman Kaiser*, R.R. #2, Baddeck, N.S. B0E 1B0

*Roger Gordon Kinsman*, 68 Lawnwood Drive, Truro, N.S. B2N 1S1

*Raymond Wilbert MacKenzie*, Millview, P.E.I. COA 2E0

*Ian Roderick MacKinnon*, R.R. #5, Truro, N.S. B2N 5B3

*Joseph Fulton McLenaghan*, R.R. #2, Black River Bridge, N.B. E0C 1B0

### Third Year — Class of '84

*Robert John Gordon*, 36 John Cross Drive, Dartmouth, N.S. B2W 1X3

*Dale Jeffrey Hebb*, Centreville, R.R. #2, N.S. B0P 1J0



*Academic Procession, Graduation Exercises - 1983.*

# NSAC Enrollment 1984-85

## Technician Diploma

### First Year — Class of '85

*Kimberley Anne Allaby*, R.R. #2, Westfield, N.B. EOG 3JO  
*Paul David Arnfast*, West River Station, N.S. BOK 1X0  
*Edwina Darlene Beals*, c/o John Conrad, R.R. #4, New Germany, N.S. BOR 1EO  
*Kimberly Anne Best*, R.R. #1, Cambridge St., N.S. BOP 1GO  
*Linda Louise Betts*, 1285 Pictou Rd., R.R. #2, Truro, N.S. B2N 5B1  
*Gerrit-jan Boonstoppel*, R.R. #1, Prince William, N.B. EOH 1SO  
*Holly Anne Bourque*, 70 Rigby Road, Sydney, N.S. B1P 4T6  
*John Francis Bray*, 6914 Vaughan Ave., Halifax, N.S. B3L 2L8  
*Maureen Elizabeth Brennan*, 26 Ankerville St., Sydney, N.S. B1P 1X9  
*James Gordon Brewster*, Hartland, R.R. #1, N.B. EOJ 1N0  
*Jeanine Marie Campbell*, 1333 Ryan Street, Moncton, N.B. E1C 8J3  
*Neil Rhodes Campbell*, North Wiltshire, P.E.I. COA 1X0  
*Darwin Clayton Carr*, 59 Broad Rd., Oromocto, N.B. E2V 1C3  
*Callum Gerard Chisholm*, R.R. #1, Heatherton, N.S. BOH 1R0  
*Ernest Vincent Chisholm*, R.R. #1, Heatherton, N.S. BOH1R0  
*Martin Evan Coldwell*, R.R. #1, Wolfville, N.S. BOP 1X0  
*Alain Leonard Comeau*, Meteghan River, R.R. #1, P.O. Box 145, N.S. BOW 2LO  
*David Scott Cooper*, R.R. #1, Upper Stewiacke, N.S. BON 2PO  
*Carol Lee Corbett*, Five Islands, N.S. BOM 1K0  
*Kevin Harold Cox*, Victoria, N.B. EOJ 2A0  
*Colin Gerard Craig*, 9 Crestview Dr., Lewis Pt. Park, Charlottetown, P.E.I. C1A 7J9  
*Arthur Glen Crane*, 32 French St., Sydney, N.S. B1N 1Y2  
*Donna Darlene Cross*, R.R. #1, Brooklyn, N.S. BOJ 1H0  
*Charles Allison Culberson*, Woodstock, R.R. #6, N.B. EOJ 2B0  
*Robert Ivan Cummings*, R.R. #1, Goshen, N.S. BOH 1M0  
*Pamela Joan Currie*, 223 Fulton Ave., Fredericton, N.B. E3A 2B8  
*Darren Edwin Davidson*, R.R. #1, Wolfville, N.S. BOP 1X0  
*Paul Steward DeBay*, R.R. #2, Brookfield, N.S. BON 1CO  
*Timothy Joseph Deveau*, R.R. #5, Kingston, N.S. BOP 1R0  
*Thane Reginald Ehler*, R.R. #1, Afton, N.S. BOH 1A0  
*Heather Lynn Fraser*, c/o Mrs. Margaret Miller, R.R. #1, Merigomish, N.S. BOK 1GO  
*John David Fraser*, Hazelbrook, P.E.I. C1A 7J6  
*Monique Marie Gallant*, P.O. Box 310, R.R. #3, Rogersville, N.B. EOA 2TO  
*Patrick Joseph George*, R.R. #2, Brookfield, N.S. BON 1CO  
*Arnold Joseph Hagen*, Breadalbane, R.R. #1, P.E.I. COA 1EO  
*Dana Neil Hicks*, Havelock, R.R. #1, N.B. EOA 1W0  
*Douglas Edward Howe*, 7 Glendale Ave., Chatham, N.B. E1N 1S4  
*Jonathan Percival Langille*, R.R. #3, Wallace, N.S. BOK 1Y0  
*Patrick David Langille*, R.R. #1, Tatamagouche, N.S. BOK 1V0  
*Randy Steven Langille*, R.R. #5, Tatamagouche, N.S. BOK 1V0  
*Daniel Taylor LeBlanc*, P.O. Box 1246, Grand Falls, N.B. EOJ 1MO  
*Ronald Joseph LeBlanc*, R.R. #4, Moncton, N.B. E1C 8J8  
*Timothy Andrew Lindsay*, R.R. #5, Hartland, N.B. EOJ 1N0  
*John Patrick Spurgeon Lloy*, R.R. #1, Collingwood, N.S. BOM 1EO  
*Roger Kenneth Love*, Mouth of Keswick, R.R. #1, N.B. EOH 1N0  
*Paul Lyons*, 76 Salter Avenue, Truro, N.S. B2N 1A5  
*John Kent Marchbank*, Summerside, R.R. #2, P.E.I. C1N 4J8  
*Alastair James Mathewson*, P.O. Box 524, Truro, N.S. B2N 5C7  
*Hilda Joanne Miller*, R.R. #6, Truro, N.S. B2N 5B4

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### First Year — Class of '85

*Perry Wallace Milner*, R.R. #2, Nappan Station, N.S. BOL 1C0  
*Dennis Graham Moss*, Havelock, N.B. EOA 1W0  
*Darby Lee Mullen*, R.R. #2, Weymouth, N.S. BOW 3T0  
*John Killam Murphy*, R.R. #2, Centreville, N.S. BOP 1J0  
*Kathleen Ann Mary Murphy*, R.R. #1, Boutilier's Pt., Hfx., N.S. BOJ 1G0  
*Paula Marie McAllister*, R.R. #1, Millerton, N.B. EOC 1R0  
*Larry Francais McCully*, R.R. #2, Petticodiac, N.B. EOA 2H0  
*Donald Robert MacDonald*, R.R. #2, Port Hood, N.S. BOE 2W0  
*John Paul MacDonald*, Mt. Stewart, R.R. #5, P.E.I. COA 1T0  
*Shelley Elizabeth MacDonald*, P.O. Box 136, Kensington, P.E.I. COB 1M0  
*John Patrick MacDonnell*, General Delivery, Antigonish, N.S. B2G 2L5  
*Frances Maureen MacInnis*, Big Pond Centre, Cape Breton, N.S. BOA 1H0  
*Richard Douglas MacKenzie*, 4 Fader St., Dartmouth, N.S. B2X 1P3  
*Carl Dana McLaughlin*, Perth-Andover, R.R. #5, N.B. EOJ 1V0  
*Cynthia Ellen MacLeod*, Oak Lawn Farm, Penobsquis, N.B. EOE 1L0  
*Donald Kenneth MacNeil*, P.O. Box 103, Bras d'Or, N.S. BOC 1B0  
*Kevin Ernest Nauss*, R.R. #2, Berwick, N.S. BOP 1E0  
*Craig Robert Nichols*, Aylesford, R.R. #1, N.S. BOP 1C0  
*Hugh Grant O'Brien*, Comp. 38, Lively Rd., R.R. #2, Lr. Sackville, N.S. B4C 2S7  
*Bradley Kirk Palmer*, R.R. #1, Berwick, N.S. BOP 1E0  
*Timothy Ray Patterson*, 750 MacLaren Ave., Fredericton, N.B. E3A 3L5  
*Susan Louise Penney*, R.R. #4, New Germany, N.S. BOR 1E0  
*Lynwood James Peters*, P.O. Box 526, Middleton, N.S. BOS 1P0  
*Marvin Isidore Peters*, Kensington, R.R. #6, P.E.I. COB 1M0  
*Anthony Steven Pickard*, R.R. #3, Bath, N.B. EOJ 1E0  
*Robert Michael Purdy*, 212 Victoria St., Amherst, N.S. B4H 1Y9  
*John Eldon Read*, R.R. #6, Amherst, N.S. B4H 3Y4  
*Ivan Barrington Reid*, Norton, Kings County, N.B. EOG 2N0  
*Lindsay Loggie Kennedy Roberts*, R.R. #1, Debert, N.S. BOM 1G0  
*Patrick Hance Rushton*, Oxford, N.S. BOM 1P0  
*Scott Douglas Durling Shaffner*, 5 Dover Ct., Dartmouth, N.S. B2W 4G6  
*Anthony Oscar Matthew Smith*, Oromocto, R.R. #3, Waterville Rd., N.B. E2V 2G3  
*Donna Lee Steeves*, R.R. #3, Moncton, N.B. E1C 8J7  
*Jane Taylor*, 14 Canterbury St., Dartmouth, N.S. B2Y 1S7  
*Walter Termer*, Kensington, R.R. #6, P.E.I. COB 1M0  
*Steven Van der Veen*, R.R. #6, Kensington, P.E.I. COB 1M0  
*Barbara Ann van Egmond*, R.R. #3, Salisbury, N.B. EOA 3E0  
*Hendrik John van Hattem*, R.R. #2, Berwick, N.S. BOP 1E0  
*Linda Ann Van Zutphen*, R.R. #7, Antigonish, N.S. B2G 2L4  
*Patrick Joseph Versteeg*, P.O. Box 137, Shubenacadie, N.S. BON 2H0  
*Allan James Vickerson*, Cornwall, R.R. #4, P.E.I. COA 1H0  
*Michael Martin Vissers*, R.R. #5, Newcombville, N.S. B4V 2W4  
*Osbourne Kenneth Ward*, R.R. #2, Centreville, N.S. BOP 1J0  
*Darrell Carey Weatherby*, R.R. #1, Tatamagouche, N.S. BOK 1V0  
*Norma Elsie Webster*, Penobsquis, N.B. EOE 1L0  
*Charlotte Lois Wilson*, R.R. #1, Stanley, N.B. EOH 1T0  
*Bruce Gerald Wood*, Marshfield, R.R. #3, P.E.I. C1A 7J7  
*Janet Marie Younker*, Cornwall, R.R. #3, Kingston, P.E.I. COH 1H0



# NSAC Enrollment 1984-85

## Technician Diploma

### Second Year — Class of '84

*Michael Wayne Beck*, R.R. #1, Wilmot Station, N.S. BOP 1W0  
*Danny James Bezanson*, Cambridge Station, N.S. BOP 1G0  
*Newton Dwayne Biggar*, Kensington, P.E.I. COB 1M0  
*Janet Deborah Blayney*, R.R. #2, Port Elgin, N.B. EOA 2K0  
*Glen Patrick Briggins*, 25 Ruth St., Moncton, N.B. E1A 4B3  
*Pansy Edith Brydon*, Waterville, R.R. #3, N.S. BOP 1V0  
*Andrew Allison Bubar*, Hartland, R.R. #5, N.B. EOJ 1N0  
*Alexander Joseph Cameron*, Box 1424, Antigonish, N.S. B2G 2L7  
*Donald Glenn Campbell*, Kensington, R.R. #6, P.E.I. COB 1M0  
*Kevin Charles Campbell*, Box 1048, Perth, N.B. EOJ 1V0  
*Kevin Leonard Carver*, Montague, R.R. #1, P.E.I. COA 1R0  
*Beverly Tremain Connell*, Lawrencetown, R.R. #3, N.S. BOS 1M0  
*Gordon Michael Cromwell*, R.R. #1, Douglastown, N.B. EOC 1H0  
*Christopher Richard DeMerchant*, Woodstock, R.R. #3, N.B. EOJ 2B0  
*Alphonsus Peter Dwyer*, Upper Rawdon, N.S. BON 2N0  
*June Alicia Fulton*, R.R. #1, Pleasant Hills Rd., Bass River, N.S. BOM 1B0  
*Steven Weldon Gartley*, Woodstock, R.R. #7, N.B. EOJ 2B0  
*Anthony Charles George*, R.R. #2, Brookfield, N.S. BON 1C0  
*Martin Gerald Gillies*, Belleisle Creek, N.B. EOG 1E0  
*Nora Katherine Glidden*, R.R. #2, Pokemouche, Box 5, Site 2, N.B. EOB 2J0  
*Jennifer Dawn Helm*, R.R. #7, Amherst, N.S. B4H 3Y5  
*Susan Ann Holmes*, Box 36, Smiths Cove, N.S. BOS 1S0  
*Dawn Marie Holt*, 15 Guest Drive, Truro, N.S. B2N 5M1  
*Sharon Leslie Jones*, Box 123, Newport, N.S. BON 2A0  
*Blanche Elizabeth Kennedy*, Box 98, Bear River, N.S. BOS 1B0  
*Scott Robert Brenton Kennedy*, R.R. #2, Brookfield, N.S. BON 1C0  
*Byron Alexander Lamb*, Berwick, R.R. #2, N.S. BOP 1E0  
*Barry Paul Lewis*, R.R. #1, Arthurette, N.B. EOJ 1C0  
*Petronella Maria Maas*, R.R. #1, St. Andrews, N.S. BOH 1X0  
*Michel J. Mazerolle*, C.P. 214, Richibouctou, N.B. EOA 2M0  
*Suzanne Joy Misner*, Centreville, R.R. #3, N.S. BOP 1J0  
*Jeffrey Donald Morse*, Kingston, R.R. #5, N.S. BOP 1R0  
*Paula Louise MacAfee*, 235 West Lane, Moncton, N.B. E1C 6V5  
*Joseph Dwain MacAulay*, Souris West, P.E.I. COA 2B0  
*Charlotte Joanne MacDonald*, 221 Station St., Glace Bay, N.S. B1A 4T6  
*Carol Deborah McDonald*, Box 2084, Sussex, N.B. EOE 1P0  
*Gina Norene MacDonald*, R.R. #1, Pictou, N.S. BOK 1H0  
*Leo Dunstan MacDonald*, 28 Goodwill Ave., Charlottetown, P.E.I. C1A 3E1  
*Paul David MacDonald*, R.R. #4, St. Peter's Bay, P.E.I. COA 2A0  
*Eva Marie McDow*, Falmouth, R.R. #1, N.S. BOP 1L0  
*Darlyne Ann MacEachern*, Ballantyne's Cove, N.S. B2G 2L2  
*Edwin Charles MacGregor*, P.O. Box 155, Eastern Passage, N.S. BOJ 1L0  
*Vans Garth MacLean*, Southwest Lot 16, Miscouche, R.R. #1, P.E.I. COB 1T0  
*Mark Allison McMonagle*, Florenceville, N.B. EOJ 1K0  
*Hugh Stanley O'Neill*, Belleisle Creek, N.B. EOG 1E0  
*Paul Vincent Overmars*, R.R. #3, St. Andrews, N.S. BOH 1X0  
*Shona Christine Patterson*, 20 Ernest Ave., Dartmouth, N.S. B3A 2H5  
*Sidney Carl Peters*, Box 526, Middleton, N.S. BOS 1P0  
*Edward Francis Pickard*, Bath, R.R. #3, N.B. EOJ 1G0

# NSAC Enrollment 1984-85

## Technician Diploma

### Second Year — Class of '84

*Susan Ann Pynn*, 13 Munden Dr., Mount Pearl, Nfld. A1N 2T2

*Clair Charles Rankin*, Box 38, St. Peter's, N.S. B0E 3B0

*Beverly Lynn Richardson*, Site 8, Box 20, R.R. #1, Waverley, N.S. B0N 2S0

*Keith Norman Richardson*, R.R. #4, New Glasgow, N.S. B2H 5C7

*Bruce Wayne Roberts*, Box 18, Site 7, R.R. #3, Moncton, N.B. E1C 8J7

*Pamela Jane Ross*, 76 Miller Rd., Truro, N.S. B2N 4Z1

*Gregory Scott Rossiter*, 793 Hillsborough Rd., Riverview, N.B. E1B 3W1

*Richard Paul Rumbolt*, Box 4, Site 14, R.R. #2, Deer Lake, Nfld. A0K 2E0

*Dean Gregory Schofield*, Hantsport, N.S. B0P 1B0

*Bruce Lloyd Sinclair*, Goshen, Guys. Co., N.S. B0H 1M0

*Karen May Spence*, 1289 Warden Avenue, Scarboro, Ontario M1R 2R5

*Stephen Reagh Spinney*, R.R. #1, Kingston, N.S. B0P 1R0

*Constance Stewart*, 1351, Apt. 2, Barrington St., Halifax, N.S. B3J 1Y9

*Lorraine Ruth Tedford*, R.R. #3, Truro, N.S. B2N 5B2

*Peter Paul van Dyk*, Caledonia, N.S. B0T 1B0

*John Lambert Van Ekris*, Covehead Rd., P.E.I. COA 1P0

*Ian David Varty*, 24 Brighton Court, Fredericton, N.B. E3B 4N6

*Melis Visser*, Vernon Bridge, R.R. #2, P.E.I. COA 2E0

*Francis John Vosman*, R.R. #3, St. Andrew's, N.S. B0H 1X0

*Wesley Nicholas Whidden*, R.R. #3, Truro, N.S. B2N 5B2

*Helen Doreen Wilson*, R.R. #2, Stewiacke, N.S. B0N 2J0

*James Kenneth Yeo*, Charlottetown, R.R. #3, P.E.I. C1A 7J7



*Autumn Assembly, Alumni Theatre, NSAC - 1983.*

# NSAC Enrollment 1984-85

## Technology Diploma

### First Year — Class of '85

*Douglas Wilson Anderson*, R.R. #3, Baddeck, N.S. B0E 1B0  
*Gordon Everett Brown*, Harris Rd., Grand Bay, N.B. E0G 1W0  
*Martin Robert Calhoun*, 48 Lilac Cresc., Fredericton, N.B. E3A 2G9  
*Christine Dawn Carroll*, R.R. #1, Milford Sta., N.S. B0N 1Y0  
*Roy Everett Coffin*, Mount Stewart, R.R. #4, P.E.I. COA 1T0  
*Lise Ann Cohrs*, 8 Rosemount Ave., Halifax, N.S. B3N 1X8  
*Donald Edward Finck*, Avonport, N.S. B0P 1B0  
*Brian Kenneth Gazeley*, Site 81, Comp. 9, R.R. #1, Berwick, N.S. B4A 2W9  
*Angela Dawn Halverson*, P.O. Box 54, Tatamagouche, N.S. B0K 1V0  
*Scott Owen Hamlin*, R.R. #1, New Ross, N.S. B0J 2M0  
*Marion Nancy Jennings*, R.R. #1, Debert, N.S. B0M 1G0  
*Belinda Lee*, 6136 Shirley St., Halifax, N.S. B3H 2N2  
*John Edward Murray*, 36 Crescent Drive, Truro, N.S. B2N 1N6  
*Donna Faye McCormick*, 55 York St., Moncton, N.B. E1C 2Y7  
*Sarah Catherine Macdonald*, 262 Brunswick St., Truro, N.S. B2N 2J3  
*Sandra Lynn McGuire*, Millville, N.B. E0H 1M0  
*Lloyd Ronald MacLean*, R.R. #7, Moncton, N.B. E1C 8Z4  
*John Kevin MacQuarrie*, 51 Harris Ave., Truro, N.S. B2N 3N3  
*Kirk Tobias Saint*, R.R. #1, Eureka, Pictou, N.S. B0K 1B0  
*Christine Mable Sellars*, West Lawrencetown, R.R. #2, Porter's Lake, N.S. B0J 2S0  
*David John Stenhouse*, 15 Edgewater Dr., Sydney Forks, N.S. B0A 1W0  
*Donald John Streach*, R.R. #2, Upper Stewiacke, N.S. B0N 2P0  
*David William Tully*, 21 Maple Avenue, New Glasgow, N.S. B2H 2B1  
*Patricia Lorraine West*, Tideview Drive, Truro, N.S. B2N 5A9  
*Sonja May Williams*, 703 Valley View St., Fredericton, N.B. E3B 4E9

### Second Year — Class of '84

*Heidi Lynn Brown*, 52 Evergreen Dr., Truro, N.S. B2N 5J3  
*Karin Nerida Robertson Chodakowski*, P.O. Box 42, Grand Pre, N.S. B0P 1M0  
*Karin Frances Debertin*, R.R. #1, P.O. Box 2218, Station 'A', Moncton, N.B. E1C 8J5  
*Karen Theresa Delorey*, Box 158, Pomquet, Antigonish, N.S. B2G 2L4  
*Lloyd Elliott*, Anagance, R.R. #2, N.B. E0E 1A0  
*Christina Paige Fields*, R.R. #2, Port Elgin, N.B. E0A 2K0  
*Stuart Arthur Gibb*, 286 Bedford Highway, Halifax, N.S. B3M 2K8  
*Gerard Joseph Gilbert*, R.R. #1, Oromocto, N.B. E2V 2G2  
*Gert (Gerry) Groenenberg*, R.R. #2, Lakeville, N.B. E0G 1S0  
*Arthur James Hustins*, P.O. Box 100, Bedford, N.S. B4A 2E3  
*Frederick William Charles Laurette*, 37 Hickman St., Amherst, N.S. B4H 2M3  
*Christina Dorthea Madsen*, R.R. #2, River John, N.S. B0K 1N0  
*Leonard Warren McBurnie*, R.R. #1, Economy, N.S. B0M 1J0  
*Fraser Sydney McCallum*, R.R. #2, P.O. Box 97, Tabusintac, N.B. E0C 2A0  
*James Everett McCara*, R.R. #1, Scotsburn, N.S. B0K 1R0  
*Erna Louise MacLeod*, R.R. #1, Louisbourg, N.S. B0A 1M0  
*Kenneth Fraser Patterson*, R.R. #1, Bras d'Or, Box 114, N.S. B0C 1B0  
*Calvin Reid Piggott*, 132 Main Street, Apt. 4, Truro, N.S. B2N 4G9  
*David Christopher Richards*, Box 111, Brookfield, N.S. B0N 1C0  
*Katherine Elizabeth Roach*, R.R. #1, Grand Falls, N.B. E0J 1M0  
*Brendan Paul Sherry*, Bedeque, R.R. #1, P.E.I. COB 1C0  
*David Joel Smith*, Berwick, R.R. #1, N.S. B0P 1E0  
*Christina Dorothy Stephenson*, 125 MacRae Ave., Sydney River, N.S. B1S 1M1  
*James Andrew Walker*, R.R. #3, Sussex, N.B. E0E 1P0

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# NSAC Enrollment 1984-85

## Special Students

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*Nevin Ralph Jackson, 187 West Prince St., Truro, N.S. B2N 1L6*

*Jean Lorraine Enns, P.O. Box 1980, Olds, Alberta, T0M 1P0*

*Krista Gaye Harvey, 1037 East Prince Street, Truro, N.S. B2N 5B2*

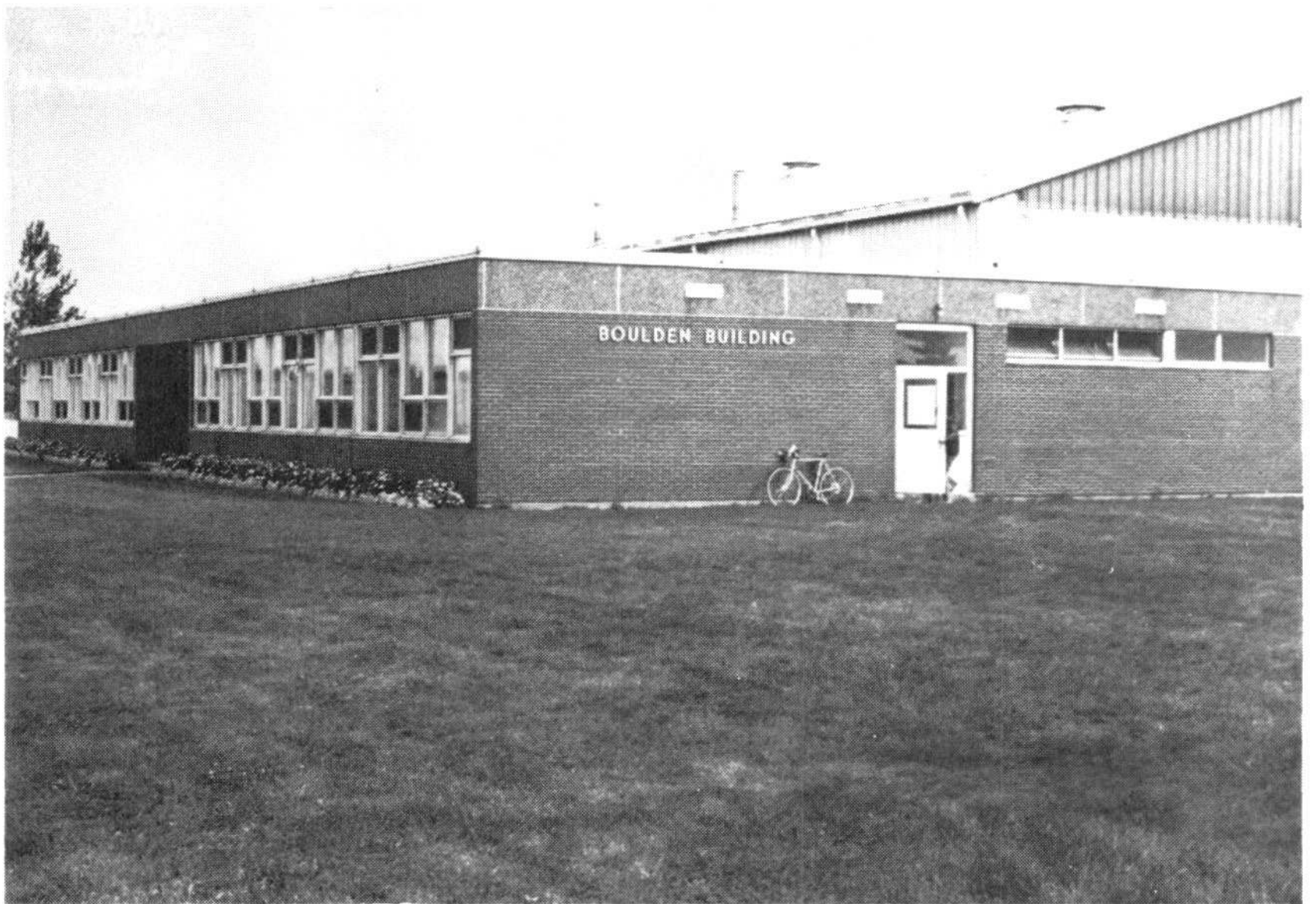
*Christine Ann Helgesen, 2387 Bowen Road, Nanaimo, B.C. V9T 3K9*

*John Ernest McCabe, R.R. #3, Westville, N.S. B0K 2A0*

*Catharine Anne Robinson, P.O. Box 24, Hanna, Alberta, T0J 1P0*

*Richard Bruce Schultz, P.O. Box 24, New Sarepta, Alberta, T0B 3M0*

*David Vincent Weatherbee, 63 Shannon Drive, Truro, N.S. B2N 3V7*



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