This catalog is the second in a series extending and updating teaching materials previously disseminated through the ERIC system, including the "Greenbook System" of training materials for higher education professionals (ED 103 083 and 084). Open Classroom Documentation, a procedural manual for an autoinstructional learning laboratory at Skagit Valley College (ED 103 086), and a number of self-contained programmed courses developed for this Open Classroom. Along with a number of minor revisions and additions to the materials cited, the present catalog contains the following major additions: (1) for Philosophic Heuristic Instruction I (ED 103 087), a cassette catalog of audio materials and a complete 15-unit course in the history of philosophy; (2) for Philosophic Heuristic Instruction II (ED 112 972) a complete course in intermediate informal logic; (3) for the Oleanna Math Program (ED 103 088 and 089), a complete course in the history of mathematics; and (4) additional materials for Tiger Learning Skills (ED 112 974). Previous additions and revisions to these instructional programs appeared in the first edition of this catalog (ED 112 971). Included here for the first time are materials for two new Open Classroom programs: Tiger Teaching Skills, self-instructional materials for public school and college teachers, and Studies in Management, self-instructional materials useful for in-service training of teachers and administrators. (EE)
This issue of the Greenbook Abstract & Catalog includes materials developed by Walter A. Coole during the academic year 1975-76, errata and minor changes in previously-produced materials.

The first issue's identifying numbers were:

ED 112 971
JC 750 522
Previous ERIC publications for the Greenbook System are:

Purplebook Alpha--ED 103 083
Purplebook Gamma--ED 103 084
Greenbook Worksheet's--ED 103 085

These materials are no longer available from Kendall/Hunt Publishing Co. Using institutions may reproduce from ERIC microfiches for instructional purposes.

Purplebook Delta has been written and is now being tested; it will be released in the next issue of this series.

* * * * * * * * * * * * * * * * *

Here are some audiotutorial kits we've added to our holdings; we can supply them at cost...

GREENLAP #9. Coole: Nowadnick's Law. "If you're dumb, you gotta work hard," says Dick Nowadnick, SVC instructor in biology. Coole uses this offhand remark as a specimen of ordinary language that can be reduced to precise, empirically-verifiable terminology. Also uses Ciebetz's Law: "Nothing is more infinite than human stupidity."

GREENLAP #10. Coole: Absolute Truth. All Walt knows about the subject. (The audio ain't very long.)


GREENLAP #14. Coole: Employment--A Changing Concept; Honesty and Such. Philosophic commentaries on how two concepts have evolved in recent years as the result of social changes.

GREENLAP #15. Coole: The Sophist, Revisited. A lengthy explanation of the employment of philosophers. Unlike most contemporary philosophers, who identify with Socrates, Coole thinks he's the reincarnation of Protagoras.
GREENLAP #16. Coole: Green Things. When a flower child assigned Walt to do a lecture on this topic, she didn't expect a Wittgenstinean pastiche.

When the Veteran's Administration launched its "get tough" policy, SVC instructors were required to complete a form for a student's file when he failed to complete a course by the end of the term. Page 3.2 gives an open-classroom variation; it's completed by the student and countersigned by the instructor. It provided a solution to red-tape problems that vexed the veteran who enrolled after the first of the term and was allowed, by school rules, to extend his work into the following term.

Pages 3.3ff present a communication to faculty advisors, offering information relevant to helping students enroll in Open Classroom courses:

Interspersed are miniature images of some curriculum boards we constructed to display instructional programs visually. These have been quite helpful in orienting students to the whole curriculum.

My apologies to the ERIC Document Reproduction Service for these miniatures. They won't do well in microfiche reductions.

We can provide copies of the 35mm negatives for graphics work if they'd be of use.

Page 3.12 is a planar display of the Tiger Teaching Skills curriculum; it wasn't part of the memorandum to advisors.

Previous ERIC publication: Basic Open Classroom Documentation

EQ 103 086
Information Regarding No-Credit Grade in Philosophy

Student

I have contacted the instructor regarding the "no credit" grade received for this course during __________ term, 19__.

( ) I enrolled during the ______ week of the term.

( ) I will complete the course during the next term, ______, 19__, meeting the following requirements:

1. Complete all work specified in the course syllabus, meeting the completion schedule (posted, negotiated);

2. Achieve a minimum acceptable passing score for the final examination, to be taken no later than __________.

3. Attend weekly scheduled conference with less than two consecutive absences until the final examination has been passed, unless I notify the Counseling Center of Extenuating emergencies.

( ) I cannot complete the course in the foreseeable future.

1. The last date of my attendance was: __________

2. I did make an honest attempt to complete the course.

3. My attendance: ( ) weekly as scheduled
   ( ) absent 25% of weekly conferences
   ( ) absent 50% of weekly conferences
   ( ) absent 75% of weekly conferences

4. The major problem I encountered in completing this course was:

and I have taken the following steps to solve that problem:

Date ____________________________

Student signature ____________________________

The abovenamed student has submitted this report to me and I concur.

Date ____________________________

Walter A. Coole
Instructor, Open Classroom.
SUBJECT: Advising Students about the Open Classroom

TO: Faculty Advisors

FROM: Walt Coole

How do you explain the Open Classroom? It doesn't fit into the so-called traditional pattern of instruction; the course offerings seem endless. The timing seems not to fit anything in the Class Schedule. The instructor is a nut.

I hope the following will help explain. It consists of some charts that present a lot of information and a few words on the pages in between.

For convenience, this package is divided into three parts:

- Learning Skills
- Mathematics
- Philosophy

Learning Skills

The purpose of this program is to convert academic pussycats into tigers. That is to say, to assist the average-to-bright student insure good grades. A student who chooses not to apply himself won't make it, regardless of what's put before him.

This program systematically avoids reading and writing problems; the Learning Materials Center provides that.

During the fall, winter, and spring terms, Education 105's day sessions are conducted three times a week separately from other Open Classroom instruction; about mid-term, attendance requirements are diminished as work is completed and daily attendance is no longer necessary. For-hours, consult the Class Schedule under Education.

Evenings and summer, Education 105 is conducted during regular Open Classroom conference hours.

Having completed the core course, students may select from a large list of prepared materials, additional credit-work under Ed. 251-255--concentrating on needs they decide should be addressed. This process can be continued until the student is prepared to meet a rather high level of learning competence.
EDUCATION 105 (1 credit)

The core course of the Tiger Learning Skills program requires about 35 hours for completion. Its four units are...

**POLICY**
- interpreting complex "how-to" instructions
- LISTENING: a student's most important communication technique

**SELF-MANAGEMENT:**
- directing efforts efficiently
- allocating time
- self-motivation

**SELF-MANAGEMENT:**
- directing efforts efficiently
- allocating time
- self-motivation

**NOTETAKING:**
- fundamentals of the "Harvard Outline" method

After completing the basic course, students may negotiate learning contracts for advanced learning skills at a rate of 45 hours per credit. Examples of the work are shown below...

**LEARNING SKILLS OF GENERAL APPLICATION**
- Advanced listening and notetaking
- Preparing for examinations
- Memory training
- Seminar tactics
- Study techniques
- Library research
- Academic freedom and responsibility
- Reading college catalogs

**SPECIALIZED LEARNING SKILLS**
- Research and writing in various subjects
- Specific reading and study techniques
- Scientific measurement and data recording
- Technical vocabularies

**PREPARATION FOR TRANSFER AND GRADUATE SCHOOL**
- Moving from one school to another
- Graduate level research
- Writing learning contracts
MATHEMATICS

Pages 5 and 6 display the main offerings in the Oleanna Math Program—almost all courses in the catalog are available in the Open Classroom. Where course numbers are not shown, we use Mathematics 251-255 and learning contracts (individual study forms). This allows us to tailor courses very closely to students' specific needs.

Will these courses transfer? Certainly. (Does anyone ask you if yours will?)

Specifically in the calculus sequence and Math 108, we modify the course to the special requirements of receiving institutions—which vary considerably. Incidentally, there's a completely different set of course numbers for the "traditional" and the "Open Classroom" calculus sequences to prevent attempts to switch in mid-sequence (see p. 5). Otherwise, students may switch back and forth between the classroom and the Oleanna Math Program.

Picking the Right Course to Start

Prerequisites are darned important in math!

If the last math course the student took was over two years ago, and he/she hasn't worked much with numbers since—the rule of thumb is to repeat the last course. We've provided many review options.

Degree-planning

Mathematical requirements should be met early in the student's program of study. In many cases, courses are prerequisite to science and technical courses. If the standard courses are inadequate to fit a particular student's need, please have her/him contact us early—hopefully, we can develop something tailor-made to fit. Don't forget to check out the receiving institution's requirements for transfer students.

Scheduling

Summer and night school: simply check the class schedule.

Daytime during the regular sessions:

-- Students who have completed one Open Classroom course can and should handle their own scheduling.
-- Students new to the Open Classroom:
   (i) schedule all other classes
   (ii) select from the Class Schedule, one pair of conference hours listed—and enter on the student's card; these are not "by arrangement"
   (iii) select an initial meeting time for the first contact

If the student arrives at the right time, at the right place, enrolled in the right course, he'll have a much smoother start.
Early Starts

I appreciate being sent students who want to start early on their course of study. Education 105 is especially good to begin before classes take up in the fall term.

After a student finishes his/her last final exam is an excellent time to drop in and get started. If she/he has spare time during the break between terms and can handle independent study, the subsequent term can be lightened considerably.

If I can predict my last week's schedule, I'll post regular early-start initial meeting hours near registration activities.

If an Advisee Contacts You About Difficulties in the Open Classroom

I want to find out about the difficulty. I can't solve problems unless I know about them.

- Is the student uncomfortable about the lack of lectures? Some students have never experienced any other form of instruction than conventional group-paced lecturing; in the math program, there are alternatives. The student might do better in a more traditional system.

- Does the student have difficulty getting oriented? The only way to get more familiarity with the Open Classroom—beyond what can be told to a student—is for the student to be led through the process once. That's what I'm for.

- Would you like to help with the details? Have the student bring his course syllabus and textbook. Begin by asking the student to explain how he's proceeded through the syllabus (complete directions for pursuing the course of study). Don't be surprised if the student is nonplussed at mention of the course syllabus—this is the most frequent source of student bewilderment: not using the syllabus as the basic guide.

- Is the student having difficulty with the subject matter? This indicates that there's some difficulty with prerequisites. Either he, you or I goofed in making sure that the student had the prerequisites and background for the course. Since we're on a continuous-enrollment basis, a course change is appropriate just about any time—but the sooner the better.

WE HAVE TUTORS AND STUDENT COACHES.

FEW NON-COMPLETIONS ARE INEVITABLE.
1. **Mathematics Required to do Well in Algebra and Advanced Courses:**
- Addition, subtraction, multiplication, division, fractions, decimals, percents, word problems, formulas, simple factoring, powers and square roots.

2. **The Multi-Track System**
- Math, once mastered, can never be forgotten. It takes just about 2 years to lose half of the content of a course (or more).

3. **Students Enrolling For the First Time Normally Take the Standard Path.**
- For students whose recollection is just 90%, we recommend they repeat the last math course, using the **Review Path**. There's one for all numbered courses listed here, except for Math 8, 100, 121, 122, and 132.

4. **MATH 20 (5)**
- **STATISTICAL INFERENCE**
  - Introduction to probability, statistics, and calculus fundamentals. Can be used to meet requirements of an institution to which the student is transferring. Prerequisite: Intermediate Algebra.

5. **MATH 21 (4)**
- **TRIANGULAR FUNCTIONS**
  - Includes: angular units, periodic functions, identities, induction, and analysis. Functions & relations.

6. **MATH 22 (3)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

7. **MATH 23 (2)**
- **CALCULUS II**
  - The rules of calculus and how to use them mathematically.

8. **MATH 24 (3)**
- **THEOREM ALGEBRA**
  - Review of arithmetic; numbers | A(M) Algebraic fractions, open sentences, algebraic operations, equations and inequalities, products and factors.

9. **MATH 25 (5)**
- **INTERNATIONAL ALGEBRA**
  - The topics covered in this course include: methods of solving linear and quadratic equations, systems of equations, the function concept, graphs, and variations. It's equivalent to the second year of high-school algebra. Prerequisite: Basic Algebra.

10. **MATH 26 (3)**
- **PRE-CALCULUS I: FUNCTIONS & RELATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

11. **MATH 27 (5)**
- **PRE-CALCULUS II: PERIODIC FUNCTIONS**
  - "College Trigonometry" includes: angular units, periodic functions, identities, induction, and analysis. Functions & relations.

12. **MATH 28 (3)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

13. **MATH 29 (2)**
- **CALCULUS III**
  - The rules of calculus and how to use them mathematically.

14. **MATH 30 (4)**
- **THEOREM ALGEBRA**
  - Review of arithmetic; numbers | A(M) Algebraic fractions, open sentences, algebraic operations, equations and inequalities, products and factors.

15. **MATH 31 (3)**
- **PRE-CALCULUS III: RELATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

16. **MATH 32 (5)**
- **PRE-CALCULUS IV: QUADRATIC EQUATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

17. **MATH 33 (2)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

18. **MATH 34 (3)**
- **CALCULUS IV**
  - The rules of calculus and how to use them mathematically.

19. **MATH 35 (4)**
- **THEOREM ALGEBRA**
  - Review of arithmetic; numbers | A(M) Algebraic fractions, open sentences, algebraic operations, equations and inequalities, products and factors.

20. **MATH 36 (3)**
- **PRE-CALCULUS V: QUADRATIC EQUATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

21. **MATH 37 (5)**
- **PRE-CALCULUS VI: RELATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

22. **MATH 38 (2)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

23. **MATH 39 (3)**
- **CALCULUS V**
  - The rules of calculus and how to use them mathematically.

24. **MATH 40 (4)**
- **THEOREM ALGEBRA**
  - Review of arithmetic; numbers | A(M) Algebraic fractions, open sentences, algebraic operations, equations and inequalities, products and factors.

25. **MATH 41 (3)**
- **PRE-CALCULUS VII: RELATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

26. **MATH 42 (2)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

27. **MATH 43 (3)**
- **CALCULUS VI**
  - The rules of calculus and how to use them mathematically.

28. **MATH 44 (4)**
- **THEOREM ALGEBRA**
  - Review of arithmetic; numbers | A(M) Algebraic fractions, open sentences, algebraic operations, equations and inequalities, products and factors.

29. **MATH 45 (3)**
- **PRE-CALCULUS VIII: RELATIONS**
  - "College Algebra" includes: axiomatic structure of mathematics, number systems, relations and functions. Prerequisite: Intermediate Algebra.

30. **MATH 46 (2)**
- **ANALYTIC GEOMETRY**
  - This learning contract sequence is developed for students in biology, economics, business administration & psychology. It includes MATH 21, and is individually developed to meet the student's specific academic needs.

31. **MATH 47 (3)**
- **CALCULUS VII**
  - The rules of calculus and how to use them mathematically.
MATH 8(6) PLANE GEOMETRY

This course satisfies college entrance requirements of two semesters of high school geometry. It emphasizes geometric topics which have high practical application and importance for advanced studies. The student may choose part of the course's work from the blackboard. Prerequisites: Basic Algebra.

PRACTICAL PLANE TRIGONOMETRY

This short course may be taken as part of Plane Geometry or as one unit learning contract.

MATHEMATICS FOR ELEMENTARY TEACHERS

Individually-developed sequence for future public school teachers based on requirements of transfer-institution and anticipated needs. Learning contracts only.

HISTORY OF MATHEMATICS

Advanced students of mathematics may study the history of the subject in a sequence of 15 one-credit courses. The historical study begins with recorded history and ends in contemporary times. Intermediate algebra is prerequisite for the first course; by the time the student undertakes the study of early modern mathematics, he or she should begin the study of calculus.

TEACHING INTERNSHIPS

Upper-division and graduate students, mathematics who are enrolled in cooperating colleges and universities, receive internship experiences in Skagit Valley College's Open Classroom Mathematics program.

In general, mathematics courses require more study than most other disciplines. The following average time requirements include conference time and testing as well as work and are offered as a realistic guide.

<table>
<thead>
<tr>
<th>Credits</th>
<th>3 credits total hours per week in a...</th>
<th>hours* standard week</th>
<th>11-week Quarter</th>
<th>Summer 12-week Quarter</th>
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</thead>
<tbody>
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<td>22.5 2</td>
<td>11</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>45     4</td>
<td>11</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>68     6</td>
<td>11</td>
<td>12</td>
<td>16</td>
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<tr>
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<td>6</td>
<td>155    15</td>
<td>11</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>7</td>
<td>188    15</td>
<td>11</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>

Students may negotiate, in advance, learning contracts for part of a course to be completed in a term—allowing two terms for its completion.
PHILOSOPHY

Pages 8 and 9 display the four philosophy courses listed in the catalog and a large number of independent-study options.

The lines between the bubbles indicate prerequisite-chains.

The "contracted studies" shown were not designed primarily for the usual 18-25 year old academic transfer student. However, they are available if needed.

What are they for?
--Mature philosophical hobbyists
--Advanced students (perhaps through enrollment at a senior institution)
--"Upside down" transfers (BA's back to learn a vocation)
who want to keep their hand into the humanities
--Philosophy majors

About Phil 120

Most subjects are difficult because they are so complex; symbolic logic is difficult because of its simplicity. This subject is notorious as the most difficult part of any college's curriculum; it compares with calculus, molecular genetics, organic chemistry, linguistics, etc.

Marginal liberal arts students who take this course to avoid algebra are almost certain to be in serious trouble.

Degree-planning
Scheduling
See pages 3-4
Early Starts
Difficulties
Typically, philosophy courses require more study than most other disciplines. The following average time requirements include conference time and testing as well as study; and are offered as a realistic guide.

<table>
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<th># credits</th>
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<th>hours' standard work</th>
<th>6-week summer course</th>
<th>quarter</th>
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<td>6</td>
<td>132</td>
<td>2</td>
<td>60</td>
<td>6</td>
</tr>
</tbody>
</table>

Students may negotiate, in advance, learning contracts for part of a course to be completed in a term allowing two terms for its completion.

**PHIL III (5) INFORMAL LOGIC**

Problem-solving strategies and solutions of problems; identification of fallacies and their avoidance.

**PHIL 120 (5) FORMAL LOGIC**

A rigorous course in the calculus of sentence relations and predications. The following are helpful preliminaries: Informal Logic & Precalculus Mathematics.

### SPECIAL PRESCRIPTIONS

- Formal interpretations of "the", "at", and set-membership. Entailments of their definitions, 6, or more credits.
- Axiomatic Set Theory
  - Sets and their relations defined and investigated; 3 credits.
- Theory of Numbers
  - The development of "ordinary arithmetic" free notions of sets and more fundamental logical concepts; special reference to Peano's Postulates. 3 credits.
- Mathematical Systems
  - How "ordinary" and "non-ordinary" mathematical systems behave; their limitations as shown by the Godel theorem. 3 or more credits.
The Tiger Teaching Skills program provides professional training for accomplished teachers and administrators of Community College District #4. All instruction is individualized or provided through student-managed seminars and is determined by learning contracts.

Some subjects related to management may be studied by managers of non-school organizations for credit in Mid-management.

**BASIC COMPETENCIES:** In this program, the student reviews basic teaching skills and selects areas of improvement for work study and practice.

**GREENBOOKS SYSTEM FOR PROFESSIONAL TRAINING IN HIGHER EDUCATION:** A system of on-going professional contract-analysis and performance upgrading: concerned with teaching, advising, committee work, community service, and college governance.

**EDUCATIONAL MANAGEMENT:** Basic principles and fundamental practices of good management.

**PRINCIPLES AND PRACTICES OF TEACHING:** A variety of topics for in-depth study for teachers who wish to attain a high degree of competence, based on theoretical knowledge of the teaching process.
PART I: General Courses

Previous ERIC publication: ED 103 087.

Introduction to Philosophy

Course outline: eliminate from student material list:

Automata Student Response Card

Course syllabus:

P. 2.4: Add under (5)

(Optional) If you'd like to hear what an acceptable oral report is like, see Greenlap #17: Model Oral Report for Introduction to Philosophy.

P. 4.1: Change...

1. Using a standard 50-entry test form, score at least 45 "right" to...

1. Using standard notebook paper, score at least 45 "right"

P. 4.1: Insert below "Specially designed projects":

Additional oral reports on recorded materials (four from the Cassette Catalog; ask for additional worksheets.

Page 4.3 provides a worksheet image for this last change, thus providing another A-project option for the student.

Pages 4.4 to 4.6 illustrate an acceptable response to a personalized essay exam question for this introduction course.

To replace the original documentation's fixed-form Cassette Catalog, we've created a sequence of 5" X 8" sheets which furnish a brief précis of the audio materials and cataloged roughly by Dewey-decimal grouping. Included in this are all the commercially available materials our program has acquired and found satisfactory. Updates for this file will reflect new acquisitions.
Introduction to Ethics

Course outline: eliminate from student material list:
Automata Student Response Card

Course syllabus: change p. 5.1...

1. Using a standard 50-entry test form, score at least 40 "right"
to...
1. Using standard notebook paper, score at least 40 "right"

Page 4.44 is a model response to this course's "Task 1.4"

History of Philosophy

The final entries in Part I are course outline, syllabus, etc. for an individualized study of the history of philosophy.
Title: _______________________

Speaker: ____________________

Key terms & concepts: ___________________________

General opinion supported: _______________________

An example from your own experience that the speaker would agree is illustrative of his opinion:

Your reservations about the ideas put forth: __________________________

YOUR INSTRUCTOR'S EVALUATION: __________________________

_____________________________  Instructor

4.3

19
A long time ago, the distinction between a laborer and a craftsman was given thus...

A LABORER ONLY WORKS WITH HIS HANDS: THE CRAFTSMAN USES, IN ADDITION, HIS MIND.

The addage also distinguishes artists—but with concepts too ephemeral for any practical use to a logical empiricist.

With a little practice and a knowledge of individual students, the instructor can write individualized essay exam questions for students who have distinguished basic course competence (grade = B) and who wish to proceed to a grade of A.

Mr. Eshola is employed as a line worker in industrial production. During his course of study, we discussed some of the equipment he worked with. While industrial safety rules are pretty strict in his plant, an alert, thoughtful worker will realize that faulty equipment is both dangerous and counterproductive. This train of thought led me to pose the following question as his essay topic—

"CONSIDER A SErious EQUIPMENT FAILURE. LIST ALL THE ROLES WHOSE RESPONSIBILITIES MIGHT COME INTO PLAY AND GIVE REASONS FOR YOUR INCLUDING THEM ON THE LIST.

Mr. Eshola's response demonstrates his capacity for developing abstract thinking from his own concrete experience in a systematic way. Here is his response...

SERIOUS EQUIPMENT FAILURE AND RESPONSIBILITY

In analyzing the problems of serious equipment failure, responsibility I will not pick one or any specific problem or mishap; rather, I will list different individuals (roles) from the very bottom of the ranks of employees through the different departments concerned with the hypothetical breakdown—and stating why they would be connected with a breakdown. I will cover most plant areas of operation; however, there may be at one time or another, other individuals not listed here—who are at fault, depending on the peculiarity of the incident. I feel that to cover the range of blame could be carried out indefinitely and that it would protract this response unnecessarily.

Equipment operator and unit serviceman.

The blame for an equipment failure must be immediately assigned, in part,
because of the immediacy of their positions with respect to the equipment. These two individuals must take responsibility for their ignorance if the area of their neglect extends into their expected training and job competence.

Unit boss.

Part of the blame falls on the unit boss for not stressing the importance of proper service and not seeing that is carried out.

Training department.

First, the training department should insure that each worker's training covers service and maintenance of equipment he is likely to work with. Second, merely presenting the information is like production without quality control; they should see that the information is learned. Also, they should systematically develop attitudes which are needed to insure that information is applied when appropriate.

Personnel department.

In selecting a man to be hired for a given position, Personnel should identify individuals who have the basic competence for operating job-related equipment and who are sufficiently responsible to do their jobs well. If they haven't assigned the right man to the job, and an equipment failure results, then they must share in the blame, even if indirectly.

Division.

In some cases, Division must pick up the responsibility for equipment failures. This might occur when there's overproduction being taken on; overproduction can wear out both workers and equipment. Or, in other cases, when equipment is run past its design-life.

Maintenance department.

If repair and checkout of equipment is below standard, or if follow-through of regular check-off is not achieved, or if maintenance people are not qualified—then there are grounds for assigning blame to maintenance. I want to say that the blame does not belong as much to maintenance personnel as the head man of the various maintenance departments. However, unqualified maintenance people should share in blame; they should report being unfamiliar with maintenance procedures for various equipment, rather than trying to bluff through without knowing the extent of their ignorance. But still, the head of maintenance is primarily at fault when he fails to assign men properly, check his men out for specific maintenance jobs, or follow through with a job check.

Equipment supplier.

To get a broader view, one which includes external agencies, we may consider the supplier—when he uses substandard materials, poor engineering design, etc. He may also fall to specify operating conditions and maintenance—or do so in such a way as to mislead the purchasing user.
Company management.

If we were to analyze the blame of a breakdown on the company level, we would find that blame, like water, always runs downhill.

I believe that it should run the opposite: uphill.

True, the blame for equipment failures of a serious nature should be laid evenly on the way up. But when we reach the top level, a major part should be put on top executives. They are the ones that govern the plants, appoint people, approve operations, and construct systems. Tacitly, they approve everything that goes on.

The breakdown of equipment—in many cases—can be traced to mental attitudes of workers toward their jobs: morale. This is the result of administrative policy, more than anything else.
**+0/1**

**INTRODUCTION**

This packet is a listing of all current "Cassette Catalog" selections. This collection was made specifically for use in the Philosophic Heuristic Instruction course, Introduction to Philosophy, and contains specifically philosophic topics as well as other topical presentations sufficiently abstract enough to be used for elementary philosophic analysis, as formulated in the report requirements specified in the course syllabus.

Although masters are supplied on 8 1/2" X 11" stock, copies may be cut to 5" X 8" sheets to meet access and filing needs. These sheets are easily re-arranged for special needs of the reader, whether he is a student, open classroom teacher, or counselor.

At the top of each card, a sequence number appears. The first digit (followed by a diagonal) designates the file section and is assigned as follows:

0: Introduction
1: Commercially-sold recordings.
2: Locally-recorded events.
3: Recordings specifically developed by the individual teacher.

Following the diagonal, the three-digit classifier, as defined for the Dewey classification system. Since the first section of this collection is furnished by me, I'll provide the classification--to elicit howls of anguish from professional library catalogers. In sections 2 and 3, these are assigned locally.

The last digit, following the period, is a sequence number within the class.

A brief of the Dewey system is as follows:

000 GENERAL WORKS
010 Bibliographies & catalogs
020 Library science
030 General encyclopedic works
040
050 General periodicals
060 General organizations
070 Newspapers & journalism
080 General collections
090 Manuscripts & book rarities

100 PHILOSOPHY
110 Ontology, methodology
120 Knowledge, cause, purpose, man
130 Pseudos & parapsychology
140 Specific philosophic viewpoints
150 Psychology
160 Logic
170 Ethics
180 Ancient, medieval, oriental phil.
190 Modern western philosophy

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5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
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<th>RELIGION</th>
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<td>200 RELIGION</td>
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<tr>
<td>210 Natural religion</td>
<td>410 Linguistics &amp; non-verbal language</td>
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<td>220 Bible</td>
<td>420 English &amp; Anglo-Saxon</td>
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<td>230 Christian doctrine</td>
<td>430 Germanic languages</td>
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<td>240 Christian morals, ritual</td>
<td>440 French, Provencal, Catalan</td>
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<td>700 FINE ARTS</td>
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<tr>
<td>720 Architecture</td>
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<td>730 Sculpture</td>
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At the top right, the recording's title is given; and following, the speaker—on, in some cases, the author, if the work is being read.

To the right of the title, a space have been provided for the local library's identification. This is left blank for local adaptation; this should be filled in for local reproduction, so that students can identify to the local librarian, the item needed.

The precis is provided to facilitate selection of material to appeal to student interest. In some instance, the recording's vendor has given me permission to reproduce its catalog description.

In the lower right-hand corner, the vendor is identified and his catalog number is provided. The price given is effective at the time I purchased the material and will change, inevitability. I do not plan to update this information.

In a few cases, the recordings listed herein are available only on disks or reel-to-reel tapes. We'll leave it to the using institutions to cope with the problem of varying media-formats as best they can.

In the catalog, there are some items that were developed at Skagit Valley college but which are made available to other institutions through "Coote & Reitan." We are privileged to include George Seidel's satiric series, Serious Whimsy.

While the market for philosophic audio presentations is a bit limited, we offer our modest facilities to other philosophy teachers for releasing their best teaching efforts for more widespread usage.

I'd appreciate suggestions for additions, or other comments on this collection.

Walter A. Coote
The Open Classroom
Skagit Valley College
Mt. Vernon, WA 98273
Not all of the recordings listed in this publication are sold in original copy as cassettes; some are sold as disks and reel-to-reel tape.

Source List

Academic Recording Institute
4727 Oakshire
Houston, TX 77027

Caedmon Records, Inc.
505 Eighth Ave.
New York, NY 10018

Innovator's Press, Inc.
P.O. Box 13052
Tucson, AZ 85732

National Association of Educational Broadcasters
1346 Connecticut Ave. NW
Washington, DC 20036

American Association for the Advancement of Science (AAAS)
1515 Massachusetts Ave. NW
Washington, DC 20005

Center for Cassette Studies
8110 Webb Ave.
North Hollywood, CA 91605

Everett-Edwards
P.O. Box 1060
Deland, FL 32720

Pacifica Tape Library
5316 Venice Blvd.
Los Angeles, CA 90019

Source List (cont'd)

Teaching Technology Corp.
Xerox University Microfilms
300 North Zeeb Rd.
Ann Arbor, MI 48106
Charles Frankel Discusses Philosophy

Speaker/author: Charles Frankel

Cassette Catalog
Time: 40 minutes each

Precis: 1. Philosophers and the Ordinary Man
2. What Is Philosophy?
3. Philosophy as a Science
4. Classical Moral Philosophy
5. Modern Moral Philosophy
6. Contemporary Moral Philosophy
7. Philosophy and Science
8. Science and Human Values
9. Politics and Society
10. The Future of a Free Society

Source: Academic Recording Institute

Catalog #: CF-1 through CF-10

Price: $ ?

Bertrand Russell Speaks

Speaker/author: Bertrand Russell with Woodrow Wyatt

Cassette Catalog
Time: 45 minutes

Precis: Philosophy and Science
The Influence of Religion
Taboo Morality
Fanaticism

Source: Cemen Records, Inc.

Catalog #: RC-1149 (Disc only)

Price: $ 6.98

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
The History of Ideas

Speaker/author: Clifton Fadiman, William Gorman, Leo Rosten

Time: 27 minutes

How ideas affect men and society.

1. Why did the idea of democracy originate?
2. Why was the theory of the United States considered a good idea?
3. Why was the abolition of slavery once an unpopular idea?
4. Why was Christianity the most dominating socio-economic idea of the Western world?

What are the major ideas that have changed the world? Critic Clifton Fadiman, social scientist Leo Rosten and William Gorman from the Institute for Philosophical Research consider this question. As they discuss such subjects as democracy, slavery abolition, Christianity and Machiavellianism, we grasp the general movement and conflict of major ideas and ideologies throughout history. When old and new ideas are at odds, the very character of society is shaken and ideas are constantly evolving: thus, the vital process of

Source: Center for Cassette Studies

Catalog #: 1787

Price: $ 14.95

Language in Human Thought and Action

Speaker/author: S. I. Hayakawa

Time: 90 minutes each

1. Why General Semantics?
2. What Do you Know and How Do-You Know?
3. The Self-concept and Its Role in Communication

Source: Everett-Edwards

Catalog #: 23

Price: $ 4.12
Semantics & Social Thought

Speaker/author: S.I. Hayakawa

CASSETTE
CATALOG
Time: 90 minutes

Precis The impact of language on concepts of social relations.

Source: Everett/Edwards, Inc.

Catalog #: 
Price: $ 4.13

Semantics & Sexuality

Speaker/author: S.I. Hayakawa

CASSETTE
CATALOG
Time: 90 minutes

Precis Language's effect on sexual behavior and outlook.

Source: Everett - Edwards, Inc.

Catalog #: 
Price: $
1/155.1  The Awful Idea of Being an Individual
Speaker/author: Chanka Frankel
Time: 31 minutes

Precis

Speaker/author: B.F. Skinner
Time: 27 minutes

Precis

B. F. Skinner considers the cultural implications of behaviorism.
- What is Dr. Skinner's view of the future of democracy?
- Who would be in power in an operantly conditioned society?
- What is Dr. Skinner's theory of counterculture?
- What is the role against final causes?

According to B. F. Skinner, not only do we have the ability to influence our biological evolution, but now through operant conditioning we have the means to control the way our culture evolves. Denying that the techniques he espouses will lead to fascism, Dr. Skinner asserts that operant conditioning can encourage progress toward freedom and dignity.

Source: Center for Cassette Studies

Catalog #: CSD1564
Price: $14.95

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
The Nature Person's Approach to Values

Speaker/author: Carl Rodgers

Catalog

Time: 37 minutes

Precis: A psychologist's advice on the ethical conduct of life.

Catalog #: BB 0646

Price: $12.00

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The Trial & Death of Socrates

Speaker/author: Plato (From the Dialogues)

Catalog

Time: See below

Precis:
Cassette 1 and side I of Cassette 2: 90 minutes - The Apologia.
Cassette 2, Side II: 45 minutes - The Crito

Catalog #: TC-GL-60

Price: $4.15
1/183.2
The Legacy of Socrates
(The Pains of Truth)

Speaker/author:
CASSETTE CATALOG
Time: 24 minutes

Pretis
The story of philosophy's patron saint
dramatically recreated.

- Why did Socrates' search for Truth panic the
citizens of Athens?
- For what crimes was Socrates sentenced to
depth?
- Why did Socrates use a myth as his chief
defense?
- Why did he refuse to escape when he had
the chance?

"If you set me free now, but on one condition
only—that I am not allowed to inquire and
further look into the nature of things on pain
of death—then I reply: while I have life and
strength I shall never cease from the practice
and teaching of philosophy." These words were
spoken by Socrates at his trial more than 2,300
years ago. In this dramatization the listener is
brought into the courtroom to hear the
brilliance of Socrates' argument and the
honesty of his convictions.

Source: Center for Cassette Studies

Catalog #: 5025
Price: $14.95

1/184.1
How to Read Platonic Dialogue

Speaker/author: Scott Buchanan

CASSETTE CATALOG
Time: 29 minutes

Pretis
Scott Buchanan stresses the dramatic structure
of the "Dialogues".

- What was Aristotle's definition of virtue?
- What three characters are present in every
comedy?
- What role does Socrates play in the
"Dialogues"?

Plato, once considered the great philosopher of
liberalism, is now thought by many to have
been an apologue for faction. This letter-
reading of Plato's work, in the opinion of Scott
Buchanan, is "thin, literal, gross, and almost
boorish." According to Buchanan, a Platonic
dialogue should be read first as a drama and
second as a comedy. In this program he
examines Plato's work in the context of this
view.

Source: Center for Cassette Studies

Catalog #: CSD1476
Price: $12.95
Meditations of Marcus Aurelius

Speaker/author: Marvin Miller

CATALOG
Time: 45 minutes each

Precis

6 cassettes, giving extracts of Marcus Aurelius' Intellectual diary.

Chance & Novelty

Speaker/author: Henry David Aiken

CATALOG
Time: 2.5 hours

Precis

A series of five talks by Professor Henry David Aiken, 30 minutes each.

Until the 18th century, according to Professor Henry David Aiken, Western philosophy was dominated by rationalistic, deterministic theories which denied the possibility that chance played an effective part in human history. Then Hume overturned those theories and, with him, the ordered universe of fixed and final causes which they postulated. There followed an explicit assault on the principle of necessity by Nietzsche, Bergson and Marx, and implicitly in the work of Charles Darwin. The American pragmatism, led by William James, then replaced conceptual necessity with the idea that virtually anything is possible, while the idea of existential necessity was discredit by the existentialists, who held out "hope that there may be new forms of human possibility not hitherto realized." Professor Aiken here chronicles the decline and fall of necessity as a philosophical principle.

Source: Center for Cassette Studies

Catalog #: CBC185

Price: $59.95


1/300.1 Teacher-Student Empathy

Speaker/author: Joseph Spatafora

CASSETTE CATALOG

Time: Library 

Precis: Qualities and characteristics of the "good" social studies teacher.

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1/301.1 Profit & Pollution

Speaker/author: Barry Commoner

CASSETTE CATALOG

Time: 59 minutes Library 

Precis: Barry Commoner examines the economy and ecology.

- What effects might nuclear technology have on the environment?
- How have natural ecological systems been broken after World War II?
- What is the relationship between profit and pollution?

Ecologist Barry Commoner says that "the real trouble is that we have changed our technology in a countervaccational way." Since the close of World War II, the scientific theories of the thirties and forties have been translated into practical technology, providing the American consumer with more than he needs and, in the process, breaking down our relationship with nature. On this cassette, Commoner explains why we are becoming the victims of our technology rather than the masters.

Source: Center for Cassette Studies

Catalog #: 29371

Price: $16.95
CASSETTE CATALOG

**1/301.1** Is There An Optimum Level of Population?

Speaker/author: American Association for the Advancement of Science (Panel)

Time: 90 minutes per cassette

Precis

1-3 Physical factors
4-5 Biological parameters
6-7 Social, personal
8-9 General Discussion

Source: American Association for the Advancement of Science

Catalog #: Write for current availability

Price: $5

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**1/301.2** Two Cultures

Speaker/author: C.P. Snow

A contemporary English intellectual discusses science and the state of humanity:

- Do government sponsored birth-control programs conflict with human freedom?
- Why do many Americans feel guilty about their wealth?
- Why are scientists responsible to the world?
- How should the state use science?

On this absorbing cassette, scientist and author C.P. Snow brings his great experience, learning, and perception to a sharply analytical analysis of major social problems which trouble the world today. Lord Snow is hopeful about today's young people and notes that curiosity and imagination are leading many of them to discover much more about the world on their own than did previous generations. Snow states that violence cannot be sustained over a long period in the U.S. since the forces of stability are quite strong but, in his view, "peripheral violence" will continue for a long time. In spite of the achievements of manned landings on the moon, he holds that space cannot properly be regarded as a challenge or an achievement. While scientifically interesting, physical exploration has nearly reached its limits. On another scientific front, however, Snow sees genetic and biological research holding great promise for the future of man.

Source: Center for Cassette Studies

Catalog #: 15238

Price: $14.95

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For current update, consult: Greenbook Abstract

5" x 8" format, cut along dotted lines.
**The Suburbanite**

*Speaker/author: Eugene Burdick & Graham Green*

**CASSETTE CATALOG**

**Time:** 25 minutes

**Summary:**
- What surprises does the suburbanite hold in store for city dwellers?
- How do sleepy rural communities become bustling suburbs?
- What unique social patterns develop in the suburbs?
- Why do suburban property taxes continually increase?
- Why do suburbanites want industries to move to their neighborhoods?

**Source:** Center for Cassette Studies

**Catalog #:** 7513

**Price:** $12.95

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**Divorce American Style**

*Speaker/author: Joseph Goldstein, Lisle Baker, Joseph Oteri, and Desmond Morris*

**CASSETTE CATALOG**

**Time:** 57 minutes

**Summary:**
- What is the "fault system" of divorce?
- How does the present system of divorce degrade the people involved?
- Why does Desmond Morris feel the law must support biological evidence?
- What are the strongest arguments against easily obtained divorces?

**Source:** Center for Cassette Studies

**Catalog #:** 16901

**Price:** $12.95
Paul Ehrlich suggests a route to bypass Doomsday.

* What are the only solutions to the energy crisis Dr. Ehrlich considers realistic?
* What percentage of the world's resources is used by Americans?
* What changes in our economic system are proposed in the cassette?
* What new laws does Dr. Ehrlich advocate?

As population increases and the supply of natural resources decreases, the world moves ever closer to three separate but equally grim disasters: war, plague, and famine. And contrary to much of our own propaganda, says biologist Paul Ehrlich, it is not the birth rate in the underdeveloped countries but the activities of the affluent white middle class in the industrial world which must be radically changed if the human race is to survive.

A program from The Center for the Study of Democratic Institutions.

Source: Center for Cassette Studies

Catalog #: CSD1489

Price: $14.95

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Technology & The Human Spirit

Speaker/author: Roy Finch

Catalog #: BB 1411.03

Price: $6.65

Source: Policy Tape Library

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
**The Explosive Society**

*Speaker/author:* Arthur Schlesinger, Jr.

*Time:* 45 minutes

**Precis**

A documentary on the causes of violence in modern America.

- Is violence in the American tradition?
- Has television made violence acceptable to American children?
- Is high population density a cause of violence?
- What is the mania of Wall Street?

Political pundit Arthur Schlesinger, Jr. suggests, in this lively and explosive program made in the summer of 1968, that Americans may well be "the most frightening people on this planet." Psychologists, sociologists, and researchers complement the Schlesinger analysis by examining the causes and prevalence of violence in the United States today. They point out that the country was born in violence, that the gun was the frontiersman's symbol of self-sufficiency, and that nowadays people have become increasingly preoccupied with protecting their burgeoning wealth. The discussion ranges further into the role of the gun in modern society and the question of violence on television programs for children.

**Source:** Center for Cassette Studies

**Catalog #:** 3349

**Price:** $14.95

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**The Adversary System**

*Speaker/author:* Warren Burger

*Time:* 58 minutes

**Precis**

Chief Justice Warren E. Burger questions the validity of our legal tradition.

- What skills in lawyers are encouraged by the adversary system?
- What is the adversary system's role in the criminal justice system?
- Is there a European equivalent of the Fifth Amendment?
- What legal system favors the professional criminal?

The adversary system is a unique creation of Anglo-American jurisprudence. To legal experts throughout the rest of the world, the system is either incomprehensible or simply nonsensical. Chief Justice Warren E. Burger is inclined to agree with these assessments, and in this program he chillingly states the merits of the "quisitorial system" of continental Europe.

**Source:** Center for Cassette Studies

**Catalog #:** CSD1460

**Price:** $15.95
Cassette Catalog:

**1/342.1**

**The Ombudsman**

*Speaker/author:* Robert M. Hutchins

*Time:* 54 minutes

*Source:* Center for Cassette Studies

**Catalog #:** CSD1269

**Price:** $15.95

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**1/342.2**

**The Rights of the Arrested**

*Speaker/author:* Eli Jarmel, Stephen Maskaleris

*Time:*

*Source:* Center for Cassette Studies

**Catalog #:** 10552

**Price:** $12.95

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5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
Police Power in Our Democracy

Speaker/author: Inbau, Fred E.

Time: 60 minutes

Precis: Misconceptions regarding lawlessness and law enforcement.

Criminologists discuss civil liberties and police authority.

What was the intent of the Constitution on police interrogation of suspects?

Have recent Supreme Court decisions enhanced police efficiency?

What is the role of the police in a democratic society?

How much power should police have in a modern democratic society?

This program interviews O. W. Wilson, who ran the Chicago police department with a reformed hand, through the points that police are as much misunderstood as they are criticized, and something goes a connection with hard and incomplete findings. They examine the problems that police face in carrying out their assignments, and the areas where civil liberties conflict with police authority. Wilson and other experts who have devoted their lives to law enforcement examine the role of the police in our society and confront the hard questions of brutality and corruption with admirable candor and vigor.

Source: Center for Cassette Studies

Catalog #: 5084

Price: $12.95

Crime, Calendars and Weather

Speaker/author: Kelley, Douglas M.

Time: 22 minutes

Precis: Weighs evidence for a relationship between crime and time, weather, lunar phases.

Source: Educational Research Group

Catalog #: 11979E

Price: $4.24
+1/370.1

Agonies of the American Student

Speaker/author: Robert Coles & Robben Fleming

Time: 28 minutes

Precis

Experts discuss rampaging problems in today's educational system.

- What are the major failures of the U.S. educational system?
- Does our educational system repress the student's natural learning desires?
- What affect does television have on today's students?
- Why doesn't our education relate more closely to our society's problems?
- Not long ago what happened in the schools of America seemed to be isolated from the main course of American life. All that has changed radically in recent years as the school and campus have become the center of dissent and protest. In this discussion, Robert Coles, research psychologist at Harvard University, and a high school principal assess the radical changes taking place in America's schools. They look searchingly at American education and find it sadly unresponsive to most students.

Source: Center for Cassette Studies

Catalog #: 3536

Price: $12.95

+1/370.2

The "New" Social Studies Teacher

Speaker/author: Spataforo, Joseph

Time: 27 minutes

Precis

Teachers' damaging students.
Climate of freedom in the classroom.

Source: Center for Cassette Studies

Catalog #: 10223

Price: $12.95
1/371.1

CASSETTE CATALOG

Speaker/author: Tim

Time: 28 minutes

Library #:

Source: Center for Cassette Studies

Catalog #: CS U 1473

Price: $12.95

1/479.1

CASSETTE CATALOG

Speaker/author: Alexis de Tocqueville

Time: 28 minutes

Library #:

Source: Center for Cassette Studies

Catalog #: 2413

Price: $14.95

De Tocqueville discusses U.S. criteria for general education.

* Why were teachers not respected in the 1830s?
* What was the American practical philosophy of education in the 1830s?
* Why did Americans disdain literature and philosophy in the 1830s?

Alexis de Tocqueville, the French historian who came to America in 1831 to study democracy, has long been fascinated by the American experiment in education. In his famous book "Democracy in America," de Tocqueville discovers that education in the United States is universal, popular, and free. The American philosophy is that a democracy can exist only when there is an education. But de Tocqueville also discovers that major weaknesses in American education. Yet, for all its drawbacks, de Tocqueville realizes that the concept of universal education is revolutionary and will come to be the model of the 20th century.
Science and the Future of Man

Speaker/author: American Association for the Advancement of Science (Panel)
Time: 90 minute/cassette

Precis
1-2 Science and the problems of Society
2-3 The Scientist & Society
3-5 Confrontation

Source: American Association for the Advancement of Science

Current Problems of Cosmology

Speaker/author: American Association for the Advancement of Science (Panel)
Time: 90 min/cassette

Precis

Source: American Association for the Advancement of Science

Catalog #: Write for current availability
Price: $
Nuclear Power Plant Proliferation

Speaker/author: Ivan Bloch

Time: 45 minutes

Library #:

Precis
Questions raised by data on nuclear power development.

Source: Audiovisual Instruction
131 Gill Coloseum
Corvallis, OR 79330

Catalog #:

Price: $4.20

Ways of Mankind

Speaker/author: Sinclair, Lester

Time: 1/2 hour each

Library #:

Precis
1. A word In Your Ear
2. The Sea Lion
3. Legend of the Long House
4. All the World's a Stage
5. Survival
6. Museum of Man
7. The Case of the Borrowed Wife
8. Lion Bites Man
9. Laying Down the Law
10. Life of a Yurok

Source: National Association of Educational Broadcasters

Catalog #: (Records only) - contact

Price: $4.28

For 5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
Space Ship Earth

Speaker/author: R. Buckminster Fuller

Precis

R. Buckminster Fuller discusses man's adaptability to environment.

* How did the death of his first child lead to the study of environment?
* What is wrong with trying to imitate nature?
* Why is a square not a true structure?

Fuller provides a truly optimistic tone for this frank analysis of man's ability to control his environment and achieve solutions to his sociological and ecological problems. The inventor of the geodesic dome and the dynamator car and house discusses the principles of nature that could lead to easily accessible comfort for all if man would realize that he is not doomed to failure and that he does not have to waste time proving or justifying his place on earth. Fuller contends that if man would return to doing what he wanted to do as a child, there would be enough discoveries to support the rest of the world with ease.

Source: Center for Cassette Studies

Catalog #: 25466

Price: $17.95

What Is the Biological Revolution?

Speaker/author: 

Precis

A panel discusses social implications of recent biological advances.

* Is biological science mankind's servant or master?
* Has the biological revolution rendered Darwinism irrelevant?
* Are humans entitled to protection from those who would experiment on them against their will?

The biological revolution offers both wonders and terrors: genetic engineering, sperm banks, transplants, mind control, the ability to select the sex of an unborn child. Likewise, the possibility of cloning looms near in the future. Indeed, good or bad, biology has come of age, only to present another challenging set of problems: where are the ethics to control its use? This panel of experts discusses current theories about living matter and makes some important points about the possibility of men and women being considered non-unique objects, suitable for experimentation.

Source: Center for Cassette Studies

Catalog #: CSD1502

Price: $14.95

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
Biology and Sociology of Violence

Speaker/author: American Association for the Advancement of Science (Panel)

Time: 90 minute/cassette

Source: American Association for the Advancement of Science (Panel)

Catalog #: Write for current availability

Price: $4.30

Reality Therapy

Speaker/author: Glasser, William

Time: 40 minutes

Source:

Catalog #: Write for current availability

Price: $4.30

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract
Leonard Baskin discusses his celebrated wood engravings.

* What are the limitations of wood engraving?
* How did Milton's "Paradise Lost" inspire Leonard Baskin to become a printer?
* What is the symbolism of Baskin's owl-man status?
* What was the inception of his work of the eleven dead men?

The works of Leonard Baskin, American sculptor and graphic artist, spring from a belief in the basic nobility of man freed from pressures of a destructive, coercive society. Seeking virtually all that goes on about him, Baskin admits to living in "an ivory tower" in Northampton, Mass., near Smith College where he enjoys teaching. For him, freedom is the recognition of necessity. In his view, the "hipster" pursuit of freedom leads to ineffectuality.

Source: Center for Cassette Studies

Catalog #: 12172

Price: $
The Essence of Poetry

Speaker/author: Wheelock, John Hall

CASSETTE

CATALOG

Time: 29 minutes

Precis

Poetry, imagination, reality, communication, obscurity

Source: Motivational Programming Corp.
512 Transamerica Bldg.
Tucson, AZ 85701
Catalog #: 010-3125
Price: $-

Serious Whimsey

Speaker/author: Seidel, George

CASSETTE

CATALOG

Time: 30 min each piece

Precis

What happens when a distinguished scholar drifts into a scatty mood? George J. Seidel demonstrates: fables about the Land of Boca Grande.

1. History of Language
2. History of Mathematics
3. History of Sex
4. History of Religion
5. History of Law
6. History of Architecture
7. History of Politics
8. History of Art
9. History of Science

Source: Coole & Reitan

Catalog #: 48
Price: $18.50
The Sophist, Revisited

Speaker/Author: Walt Coole
Cassette
Catalog Time: 67 minutes

Introduction
1. The Philosopher as Arbiter and Ombudsman
3. Computer Programmers and Managers
4. Pre-ministerial and Pre-law Preparation
5. University Professors and Community College Teachers

Nowadnick's Law: A Linguistic Reduction

Speaker/Author: Walt Coole
Cassette
Catalog Time: 16 minutes

Precis
Begins with a homely comment of a colleague, reducing it to an empirically verifiable, mathematical statement—demonstrating the kind of linguistic reduction program idealized by logical empiricists.

Source: Coole & Reitan
c/o Philosophy Department
Skagit Valley College
Mount Vernon, WA. 98273
Catalog #: Greenlap #15
Price: $10.00

Greenbook Abstract
Absolute Truth: What Little I Know About It

Speaker/Author: Walt Coole

Cassette

Catalog

Time: 20 min.

Price: $10.00

Three conceptions of 'truth' as a description of sentences; some lesser uses of the word.

Responsibility: A Conceptual Concept

Speaker/Author: Walt Coole

Cassette

Catalog

Time: 18 min.

Price: $7.50

Semantical and logical structure of the concept of "responsibility" in the context institutional and societal discourse.
Pragmatism and Existentialism

Speaker/author: Walt Coole

CATALOG

Time: 31 minutes

Price: $14.00

Alfred North Whitehead--A Square Peg in a Round Hole

Speaker/author: Walt Coole

CATALOG

Time: 24 min.

Price: $10.50
1/190.4  Green Things

Speaker/Author: Walt Coole

Time: 10 min.  Library #:

Price:

A pastiche from Wittgenstein.

1/170.1  You're As Good as Your Words

Speaker/Author: Irvin, Charles

Time: 55 min.  Library #:

Price:

Communication, effectiveness, information transmission, how-to.

Source: Edward M. Miller Assoc. Inc.
1221 McKay Towers
Grand Rapids, Mich.

Catalog #:  Price: $9.00

Catalog #:  Price: $10.00
Employment: A Changing Concept
Honesty and Such

Speaker/author: Walt Coole
Cassette
Catalog
Time: 30 min. each
Library #:

Product
Two short lectures on concepts of current interest, both of which are being perceived differently.

Source: My Philosophy Department
Shore Valley College
Mount Vernon, WA. 98273
Catalog #: Greenlap #14
Price: $ 16.00

The Imperfect World

Speaker/author: Rene Dubos, Ian McCord, Margaret Mead, Don C. Shaw
Cassette
Catalog
Time: 26 min.
Library #:

Product
The future of the world in a technological mode.

Source: Innovators Press

Catalog #: 53
Price: $
The following listings are included in the Skagit Valley College Open Classroom collection, but are not generally available.

They are included to give the instructor instances of what sort of audio materials can be collected and used.

2/170.1: "Violence" was a joint response to a student-assigned discussion session of personal biography.

2/171.1: "Is the Will to Believe Immoral?" relates well to a passage in the basic text; but it's tough listening for a freshman. The more sophisticated student does quite well, however.

2/190.1: "C. I. Lewis" allows the listener to gain an impression of Keyt's personality. Useful, since some of my students become his in the course of their academic work.

2/340.1: "Law Day Address" is copyrighted. We can only use it on our own campus.

2/370.1: "Philosophy and Academe" introduces students to Dr. Keller. It's sometimes useful in counseling would-be philosophy majors of marginal capacity.

Nixon's speeches, reviewed now, sometimes causes a scene in the library's listening laboratory. They were recorded from the radio.
Violence: Its Effect on Guys Our Age

Speaker/author: Walt Cooie & John Larson

CASSETTE CATALOG
Time: 30 min.

Precis

Walt: A review of escalating violence during his lifetime
John: Technological and sensory violence

Source:
Catalog #:
Price: $2/171.1

Is the Will to Believe Immoral?

Speaker/author: Mavrodes

CASSETTE CATALOG
Time: 1 hour

Precis

Consider William James' doctrine of the "will to believe" and some moral entailments. Recorded at WMSC during spring 1968 philosophy colloquium.

Source:
Catalog #:
Price: $5.5

5" x 8" format, cut along dotted lines. For current update, consult: Greenbook Abstract

Price: $4.39
CASSETTE CATALOG

**Speaker/author:** John Keyt

**Time:** 1 hour

**Library #:**

**Catalog #:**

**Price:** $4.40

**Source:** Recorded by Richard Krajovic, 1972.

C. I. Lewis: biographic, modal logic, ontology, theory of meaning, epistemology, axiology, ethics.

---

CASSETTE CATALOG

**Speaker/author:** Ralph Nadir

**Time:** 45 min.

**Library #:**

**Catalog #:**

**Price:** $4.40

**Source:** Recorded by Vicki Parker, 1970.

Violations of environmental law and morals; the unequal opportunity for justice.
Dr. Keller's address to the Northwest Conference on Philosophy: the future of philosophy in the expected changes of higher education.
2/329  1968 Acceptance Speech  

Speaker/author: Hubert Humphrey and Richard Nixon  

CASSETTE  
CATALOG  Time: 1 hour  Library #: 1436  


Source:

Catalog #:

Price: $  

2/329  1972 Acceptance Speech  

Speaker/author: Richard M. Nixon  

CASSETTE  
CATALOG  Time: 30 minutes  Library #: 1435  

Precis:  

Source:

Catalog #:

Price: $  

53  

Price: $  

5" x 3" format, cut along dotted lines. For current update, consult: Greenbook Abstract.
The following statement is an excellent response to the question "Why do we need ethics?"

It was submitted by a student at Skagit Valley College during the fall term, 1975.

The characteristics that impressed me were...

--the response shows a clear knowledge of ethics as rational, systematic, humanistic, and objective

--because Ms. Chason has a good command of the vocabulary of concept-terms, she is able to write a brief statement which is both precise and sufficiently broad in scope.

--the statement is unequivocal, thus, I can identify rather clearly where my own viewpoint differs.

Ethics is a system of human values that is not dependent on religious doctrine or government. Therefore, we need ethics as a pure objective foundation of values. Ethics makes possible a systematic study of our own ideals and goals; motives of choice and good and bad behavior. Man needs ethics as a way of examining moral disagreements and ideally reaching systematic principles on moral life. Man is curious about his actions. Ethics provides a means to reflect upon these actions and formulate a general moral doctrine. Ethics provides a basis for law making. It has universal application in comparison to laws which are not consistently morally right. In summary, we need ethics as a means to monitor the moral right and wrong of voluntary action.
Skagit Valley College Course Number: Philosophy 251-255
Quarter credits: 1-15  Semester credits: 1-9
The courses outlined in this paper consist of fifteen one-credit modules corresponding to conventional historic periods, thus:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Period</th>
<th>Era</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ancient</td>
<td>Pre-socratic</td>
<td>Prehistory</td>
<td>400 BC</td>
</tr>
<tr>
<td>2</td>
<td>Ancient</td>
<td>Socrates, Plato, &amp; Aristotle</td>
<td>400</td>
<td>323</td>
</tr>
<tr>
<td>3</td>
<td>Hellenistic</td>
<td>323</td>
<td>200 AD</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Roman</td>
<td>200</td>
<td>525</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Medieval</td>
<td>Monastic</td>
<td>525</td>
<td>1215</td>
</tr>
<tr>
<td>6</td>
<td>Medieval</td>
<td>Scholastic</td>
<td>1215</td>
<td>1350</td>
</tr>
<tr>
<td>7</td>
<td>Renaissance</td>
<td>Early</td>
<td>1350</td>
<td>1492</td>
</tr>
<tr>
<td>8</td>
<td>Renaissance</td>
<td>Late</td>
<td>1492</td>
<td>1600</td>
</tr>
<tr>
<td>9</td>
<td>Modern</td>
<td>Early</td>
<td>1600</td>
<td>1700</td>
</tr>
<tr>
<td>10</td>
<td>Modern</td>
<td>Enlightenment</td>
<td>1700</td>
<td>1800</td>
</tr>
<tr>
<td>11</td>
<td>Modern</td>
<td>Romantic</td>
<td>1800</td>
<td>1900</td>
</tr>
<tr>
<td>12</td>
<td>Modern</td>
<td>Scientific</td>
<td>1900</td>
<td>1920</td>
</tr>
<tr>
<td>13</td>
<td>Modern</td>
<td>Reconstruction</td>
<td>1920</td>
<td>1940-</td>
</tr>
<tr>
<td>14</td>
<td>Modern</td>
<td>Recent</td>
<td>1940</td>
<td>1963</td>
</tr>
<tr>
<td>15</td>
<td>Modern</td>
<td>Contemporary</td>
<td>1963</td>
<td>Present</td>
</tr>
</tbody>
</table>

Average student completion time for each unit: 30-50 hours.

PERFORMANCE OBJECTIVES

On completion of a module of this sequence, the student should be able to...

without memory-aids:

1. recognize prominent philosophers of the era, giving approximate dates, locales, and brief summaries of philosophical work;

2. relate the philosopher and his ideology to philosophic and general history loosely;
with memory-aids

3. give exact dates, locales, and important biographical details bearing on the philosopher's works;

4. list and summarize philosophical writings;

5. tell what historical and philosophic events influenced the philosopher's thinking;

6. list some important consequences of the philosopher's teaching.

The memory-aids from which the student works will include a detailed chronograph with a scale of \( \frac{1}{4} \) cm/annum and a working file of 12 X 20 cm (5" X 8") cards. All memory-aids must be the student's own work and must appear in the format specified in the syllabus.

**DISCUSSION**

Literature on teaching the history of philosophy varies considerably in evaluating such accomplishments.

The most adverse opinion holds that this kind of historical knowledge is without merit for any purpose; but doesn't claim that any harm comes to the student who acquires doxographic knowledge of the history of philosophy;

The most favorable authority asserts that doxological knowledge is a necessary background for "in-depth" historical studies.

The purpose of this sequence is to provide the academic philosophy major and the persistent amateur with the ability to conduct such in-depth study, thoroughly grounded in a knowledge of historical context—as well as to display all philosophic options available in a systematic and more-or-less exhaustive manner.

**ENTRY REQUIREMENTS AND SEQUELA**

A student, entering this sequence, should be an accomplished academic learner, able to write well, read difficult prose, outline and summarize quickly, and grasp sequences of events as a whole. A fair knowledge of general history is essential; i.e. good performance in "world civilizations" courses.

2. A DOXOGRAPHIC history of philosophy places in chronological order: biography, major conclusions; historic events—noticing "successions" or in familiar, but misleading terms, "schools"
Within the discipline, the student should be able to...

<table>
<thead>
<tr>
<th>skill</th>
<th>PHI (I) course</th>
</tr>
</thead>
<tbody>
<tr>
<td>identify concepts</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>summarize ideas</td>
<td></td>
</tr>
<tr>
<td>analyze</td>
<td></td>
</tr>
<tr>
<td>evaluate</td>
<td></td>
</tr>
<tr>
<td>classify, according to</td>
<td>Advanced Survey of Philosophy</td>
</tr>
<tr>
<td>disciplinary sub-topic:</td>
<td></td>
</tr>
<tr>
<td>concepts'</td>
<td></td>
</tr>
<tr>
<td>ideas'</td>
<td></td>
</tr>
<tr>
<td>philosophic essays</td>
<td></td>
</tr>
</tbody>
</table>

The ability to type is of considerable utility, but not essential. Upon completing the historic survey of a given era, the student may suspend pursuit of this sequence in order to study, in depth, a philosopher or a concept according to other syllabi in the PHI (I). schedule or attend advanced classes in lecture or seminar.

The latter activities should be encouraged to satisfy the need for more than doxographic history.

MATERIALS

*Items marked with an asterisk are conveniences to improve appearance of the time-line and reduce student time involved with mechanical operations in constructing the time-line.*

Brand-names are given as indications of the item needed, but aren't essential.

Print materials


*World Almanac.* (Current year.)

*Webster's Biographical Dictionary.* Mirriam-Webster.


For card-file

Pre-printed file-leader cards, 12 X 20 cm (5" X 8")
Index cards,
Index file dividers, alphabetic -- 2 sets
Index card-file box, 12 X 20 X @20 cm (@8" deep)
Two colored felt-tip pens (broad-tip) -- any two colors
Fine-line black pen (ink or ball-point)
(Optional) Portable typewriter
Long file-card storage boxes

For chronograph

Brown wrapping paper @1 meter wide. (30-42''). Length: 4 meters for each
century covered in the module
Red finepoint felt-tip pen
Meter-stick
Long table
Liquid paper, buff-colored; Liquid paper thinner
Red Mystic tape or builder's tape -- @5 cm (2") wide

* Two pieces of wood, 5 X 5 cm (2") @45 cm long (18")
* Chronograph rubber stamp 4cm/annum
* Red rubber stamp pad
* Serial numberer-stamp, with red ink
* Dennison Pres-a-ply Removable Labels, 5 X 10cm (4" X 2")
* Dennison Red file folder labels
* Chronograph stamp-aligning template: plywood

Approximate
measurements

Tape-measure: 10 meter or longer.
* IBM Flowcharting Template
* Transparent Mystic Tape 5cm. (2")
* Scotch tape, 2 cm or narrower

Syllabus: History of Philosophy -- Walter A. Coole

---4---
INTRODUCTION

This syllabus will guide you through fifteen "eras" of the history of philosophy. Each era will require from 30 to 50 hours' study.

Through the study program outlined, you'll gain a knowledge of history that's described as DOXOGRAPHIC: you'll be able to place philosophers and their thought into temporal and tradition sequences. Doxographic knowledge of the history of philosophy is not a full education in history, but it's a necessary basic.

In accomplishing your work, you'll build a time-line in grand scale and outline the works of many philosophers in some detail. This "tour" of philosophy should lead you to encountering some great thinkers who have had ideas that you'll find interesting and useful. Having identified them and learned something of their historic surroundings, you'll then be well equipped to select a few for more intense study.

OBJECTIVES

Upon completion of a module of study -- an era -- you'll be expected to...

without memory-aids:

1. recognize prominent philosophers of the era, giving approximate dates, locales, and brief summaries of philosophical works;

2. relate philosophers and their ideologies to historic events;

with memory-aids:

3. give exact dates, locales, and important biographical details bearing on philosophers' works;

4. list and summarize philosophical writings;

5. tell what historical and philosophical events influenced philosophers' thinking;

6. list important consequences of the philosophers' teachings.
The memory-aids from which you will be working will be entirely of your own construction; by following directions in this syllabus, you'll produce neat, stylized memory aids which will serve you later in further work as a historian of philosophy. It may be that later, you'll decide that the materials aren't of much utility, but the process of producing them will have been the significant outcome; because the work involved will take you through an intellectual experience that's unique to you—and a lot more fun than lectures!

Your memory-aids will consist of:

---a chronograph [time-line] about 1 meter wide with a scale of 4 cm/annum*

---a card-file summarizing important factual information about the philosophers you'll be studying

MATERIALS

Print materials. These materials include all books needed for the whole 15-unit sequence; many are quite expensive. I'd suggest that you not buy any of them at first. Locate them in the Open Classroom and the college library. After you've completed two or three units, you'll be able to see what you want for your own and which you can conveniently use in other locations.

World Almanac. (Current)
Webster's Biographical Dictionary. Mirriam-Webster.

*At the time this syllabus is being written, 1976, we're just about to go METRIC; ergo, this will be a metric syllabus. 1 meter = 39"; 1" = 2.5 cm; 5" X 8" index cards become 12 X 20 cm index cards.
For your card-file. You'll need to purchase all of these...

12 X 20 index cards
Index file dividers, alphabetic: you'll need a second set at the beginning of the second module
Index card-file box, 12 X 20 X @20 for the current module's cards; some boot boxes work out fine
Fine-line black pen: ink or ball-point
Broad-tip felt pens: any two colors, preferably black and red
(Optional) portable typewriter

Long 12 X 20 card-file boxes -- beginning with the second module, you'll need several to store cards generated in previous units' work separately from the current work.

From the instructor: pre-printed 12 X 20 file-leader cards -- a handful

For your chronograph. This grand-scale time-line study will be brown paper (which doesn't show light pencil-marks)--done in red and white, both of which stand out well visually. For a start, purchase only these items:

Red fine-point pen: ink or ball-point
Red narrow felt-tip pen
Liquid Paper, buff-colored and Liquid Paper Thinner -- for corrections
#2 lead pencil
Two pieces of wood, 5 X 5 X 45 (a couple of 2-by-4's will work) -- to hold the rolls of paper down
Dennison Pres-a-ply Removable Labels, 5 X 10
Dennison Pres-a-ply file folder labels
IBM Flowcharting Template, good paper-cutting scissors
Narrow (@ 3 cm) Scotch tape, non-yellowing

And locate a long table to work on.

Other materials you'll need are available in the Open Classroom; locate them all now...

Brown wrapping paper @1 meter wide. Length: 4 meters for each century covered in the module, plus 2 meters spare
Meter-stick
Tape: red Mystic or builder's tape 5 cm wide
translucent Mystic tape 5 cm wide
Chronograph rubber stamp
Long rubber-stamp pad
Serial-numberer
Template
10+ meter tape measure
A PRELIMINARY EXERCISE.

Before undertaking your first unit of historical study, let's build a chronograph based on your place in history. This will get you accustomed to the mechanics of drawing a neat, 'stylized chronograph of convenient size. It will also provide you with a piece of material by which you can sharpen your historical depth-perception.

This chronograph will cover the years from 1750 to 2000 AD and involve your own personal biography.

Take 12 meters of brown paper. Using red 5cm tape, bind the outer edge of the roll. Measure off about a meter and begin the time-line about 25 cm from the top of the roll, using the chronograph rubber stamp and template.

Your work, laid out on a table should look like this...

5 x 5 x 45 wood blocks
A closer look at the red time-line thus generated reveals something like this...

<table>
<thead>
<tr>
<th>Jan</th>
<th>Apr</th>
<th>Jul</th>
<th>Oct</th>
<th>Jan</th>
<th>Apr</th>
<th>Jul</th>
<th>Oct</th>
</tr>
</thead>
</table>

Each year corresponds to 4 cm; the first month of each quarter is designated.

Next, you're going to number the years neatly and quickly.

Select the serial-numberer and READ THE ACCOMPANYING INSTRUCTIONS THOROUGHLY. Set the number-sequence to 1749 and test it once. Note the mark on the metal that will be contacting the paper; it is an index to locate the years correctly on the time-line.

Your first two years should look like this...

<table>
<thead>
<tr>
<th>1750</th>
<th>1751</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>Apr</td>
</tr>
</tbody>
</table>

Now, extend the time-line to the right until you reach the year 2000; bind the right edge of the paper.

Having now manipulated time-lines and rolls of brown paper for a while, you're in a position to make a decision. Do you want to keep on working with rolls of paper, or would you rather accordion-fold all of it? Remember, when you complete the whole historic study, you'll have about a hundred meters of brown paper in 15 sections.

If you decide to accordion-fold the stuff, I'd suggest that you do it in 30 cm sections. Do this before you proceed any further.

Having made the decision and acted on it, you can now begin entering historic events. Using the World Almanac's chronology section, enter all events from 1750 to the present as accurately as possible above the time-line.

Finally, using your own life-history and that of your parents and grandparents, pick out one or two events (birthdays, graduations, major moves, jobs) for each decade—as far back as you can go. A few people can get back to the 1750's with their family history.
Enter all family events below the time-line, using this shape and the red pen.

Life-spans should be marked with the red felt-tip pen with name, birth and death typed or printed on the red labels; if the person is still living, end the line with dots. Life-spans should look like this...

<table>
<thead>
<tr>
<th>John Q. Doe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900-1945</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Richard M. Roe</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. 1956</td>
</tr>
</tbody>
</table>

When you've completed this, you should ask the instructor to inspect your work.
UNIT LEARNING PROCEDURE

A. Prepare chronograph
   1. Cut brown paper--4 meters per century plus two spare.
   2. Draw time-line and print years.
   3. Accordion-fold if that's your style.
   4. Enter major events from *World Almanac* at the top edge of the paper.

B. Survey the era being studied
   1. In the last section of this syllabus, "Periods and Assignments," note the passages indicated in the Cue Texts for the era.
   2. Read each passage carefully, setting up a file-leader card for each philosopher mentioned; as you read, enter as much information as you can on the card. This is the beginning of the memory-task leading to the performance objectives--for that reason, you should review the objectives and keep in mind that you should be working toward them.
   3. If you have in mind any philosopher who should be included, but is not, add a file-leader card for him, noting your sources under "Remarks."

C. Recapitulate the era (Repetition is necessary for all memory-work; this tactic will reduce the tedium by varying the activity--and sometimes revealing new information.)
   1. For each philosopher you've identified, read the articles in *Runes' Pictorial History of Philosophy* and *Dictionary of Philosophy*, filling in newly acquired information.
      a. Scrutinize the pictures for clues to the time, but be wary of anachronisms.
      b. Note all technical terms you encounter; be sure you can define them and use them correctly in context.
      c. Identify a major locale--not usually the birthplace, but rather, the school at which the man taught or his longest residence. Underscore that locale on the card.
      d. Look for historical incidents and note them.
      e. As you complete each philosopher's file-leader card, make a small check in the upper left corner of the card (√).
   2. Now, go through the cards again. This time, look up the locale and time in the *Historical Atlas of the World* (use Goode's *World Atlas* to supplement your geographic intuitions if you feel it necessary.) With the atlas open, read the appropriate passages of *The Encyclopedia of History*, making note of events which plausibly bear on the philosopher's thinking. To keep track, make a second check (√/√).
   3. A last review. In this step, you'll concentrate on the card-entries, 'Succession' and 'Consequences'. You'll need to work on a large surface; you'll use, in addition to your card-file, some blank index cards and Hunnex's *Philosophies and Philosophers*. Read all the way through the book, noting on your cards: DIRECT influences (teachers and known reading), names of philosophic "schools", and philosophers who are known to DIRECTLY have worked from the person's writings and teaching.
In some cases, your file-leader card won't provide enough space for all the information you have to say about succession and consequences. For them, start a supplementary file-leader. The philosopher's name should be written in the upper left-hand corner of the card and cards should be sequenced in the upper right-hand corner: S-1, S-2, S-3... These should be kept immediately behind the file-leader.

As you've completed this last review, and are satisfied that your information is complete, make a third check-mark (√√√).

D. Complete the chronograph

1. Draw in life-lines thus...

...in red as you did in the practice.

a. Exact dates are less accurate (and significant) as you proceed from the present. If you're given several years for the same event, average all dates the references provide.

b. Information about months are seldom available for events before the modern period. Use "Jul"–mid-year if the month isn't provided.

c. The label should contain name, dates, and major locale, thus...

Nikolai Bourbaki II
b. 1921
Sedro-Wooley

Use the red file-folder labels and locate them about mid-line.

d. SPACE LIFELINES AT LEAST 5 CM. APART.

e. During later periods, you'll find yourself running out of space—about 1700, maybe sooner. What to do?
Set up supplementary strips of brown paper—the top of which will lie just a hair-line below the time-line. Along the top, make reference points, thus...

1700

and matching points at the bottom of the first strip—say about every 25 years (1 meter). Do this in black.
2. Enter biographic details
   a. By using the white Pres-a-ply labels, you'll eliminate a lot of messy corrections.
   b. Publications should be shown with this outline from your flowcharting template (Document)

   ![Diagram showing the placement and cutting of labels and the arrow drawn to the date on the life-line.]

   The arrow, drawn to the date on the life-line, must be drawn after the label is cut and stuck onto the chronograph below the life-line.

   c. Other events should be shown with the "display" outline, thus...

   ![Diagram showing the "display" outline for other events.]

   d. If you have two events or publications close together, you may use this kind of off-setting; but you might consider dropping a few entries selectively—you may be trying to display too much detail...

3. Concurrent historical events should be displayed above the timeline in "process" rectangles, with arrows indicating approximate dates...

4. As each file-leader card is completed, strike the three check-marks (✓✓✓) and arrange them in the order you wish to undertake detailed study: chronological or succession order.
E. Detailed study of each philosopher is to be accomplished by writing a "Harvard Outline" of the philosopher's entry in the Encyclopedia of Philosophy.

1. Each card should be headed with the philosopher's name on the front: upper left-hand corner. Sequence each card only on the front in the upper right-hand corner: 1, 2, 3, ... Use both sides.

2. Use ink or type. Be exactly neat. Abbreviations should be decipherable by any casual (philosophically trained) reader; on this order:
   - philosophy
   - (initial) the philosopher's name
   - lg logic
   - ae aesthetics
   - et ethics
   - mp metaphysics

See the MLA Style Sheet for other acceptable abbreviations.

3. As you complete each set, check the chronograph for completeness and accuracy.

4. Before you file the set of cards, I'm going to show you how to insure against the horror of a scrambled deck.

   At the top of the file-leader card, note eight dots; four on each side. For the time being, we'll use only the four on the left.

   Take one of the colored felt-tip (broad) pens. The first set of cards filed should be marked with one stripe, along the top edge of the deck. The second, two stripes; the third, three stripes; the fourth, four stripes.

   On the fifth set, begin with one stripe -- using the other color.

   On your eighth set, you'll have unique markings for each set.

   So far, so good. File these cards in the small file-box, using the alphabetical dividers.

   You're now asking the question, "What happens if the next set's markings are like the one in front or behind the place where it's to be merged into the larger file?"

   That's what the dots on the right-hand side are for: guides for other marking.

WHEN YOU'VE COMPLETED THE MODULE'S CHRONOGRAPH, WRITTEN OUTLINES FOR EVERYBODY, AND ALPHABETIZED ALL CARD-SETS; YOU'VE COMPLETED ALL PRESCRIBED STUDY.
EXAMINATION

You should arrange an appointment with the instructor at a time when there's not likely to be any traffic in the display area.

For the examination, you'll need your chronograph and the cards you've developed for this module. You'll need your "personal" time-line and (after the first module) the preceding module's chronograph.

First, you'll be asked to lay out the whole chronograph; the instructor will examine your card-file while you're doing that.

To test for your having met objectives (1) and (2), the instructor will select a philosopher of the era and ask for a brief description.

To test for the remaining objectives, the instructor will select another philosopher. You'll have a few minutes to prepare before giving a detailed account of him.

After the examination, your instructor will be interested in comparing your life-line with the era being studied.

AFTER THE EXAMINATION

When you complete the second module's work, you'll want to merge the card-sets you've developed with the first module's card-sets.

If you've completed a learning-contract and are contemplating more study, you have options:

--Continue with historical surveys of the next era OR
--Suspend historical explorations and study one of the philosophers you've met recently in depth

Either option is acceptable.

A FEW PERSONAL COMMENTS

In 1965, after having studied the history of philosophy concertedly for several months, I found myself stuck for six weeks, waiting for the beginning of a job.

I decided to fill much of the time with constructing a chronograph roughly the same as the one described in this syllabus. The result was a bit scruffy, but essentially a usable working strip about 75 yards long.

Since the chronograph had been constructed in a one-room apartment, I'd never had the chance to unroll it full length for several months. I finally did it on an untrafficked country lane when the weather was good.

I spent the better part of a day, wandering up and down the darned thing, reconstructing everything I ever learned about the history of philosophy.
In retrospect, I decided that I wished that I'd learned philosophy's chronicles this way first. And so, when the opportunity arose, I took the opportunity to write out how I think the process of learning the history of philosophy should be done.

I've tried to include every short-cut and develop a few mechanical techniques to eliminate student effort that doesn't produce significant learning.

Perhaps not every student can learn the history of philosophy by this method--but there are plenty of "conventional teaching" programs that offer alternatives.

It must be emphasized that the doxographic knowledge of history that this program yields is not everything there is to be said about the subject. But I firmly believe that this kind of historical knowledge is essential to more sophisticated study; and that the would-be historian who attempts to skip over it would try to write books without being able to spell.
## PERIODS AND ASSIGNMENTS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Module</th>
<th>Period</th>
<th>Era</th>
<th>From</th>
<th>To</th>
<th>Number of Centuries</th>
</tr>
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<td>400BC</td>
<td>323</td>
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<td>1492</td>
<td>1600</td>
<td>1.1</td>
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<td>Early</td>
<td>1600</td>
<td>1700</td>
<td>1</td>
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<td>1800</td>
<td>1</td>
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<td>1940</td>
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<td>1963</td>
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<td></td>
<td>Contemporary</td>
<td>1963</td>
<td>Present</td>
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</tr>
</tbody>
</table>

I'll bet that some history teacher gave you different dates for the periods and eras shown above. Nobody has their dates straight!

Wait until you get a look at the cue-texts and their assignments.

In preparing time-lines, start 50 years before "From" and run 50 years after "To". This will add another century (4 meters) to the time-span given above—then, leave a meter of blank brown paper on either side of the whole time-line.
Your basic cue-text will govern which philosopher belongs in which module. It's Avey's *Handbook in the History of Philosophy*.

<table>
<thead>
<tr>
<th>Unit</th>
<th>From page</th>
<th>To page</th>
<th>Last individual in the module</th>
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</thead>
<tbody>
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<td>72</td>
<td>93</td>
<td>Amalric</td>
</tr>
<tr>
<td>6</td>
<td>93</td>
<td>109</td>
<td>John of Jandun</td>
</tr>
<tr>
<td>7</td>
<td>110</td>
<td>115</td>
<td>Nifo</td>
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<tr>
<td>8</td>
<td>115</td>
<td>123</td>
<td>Suarez</td>
</tr>
<tr>
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<td>124</td>
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<td>145</td>
<td>175</td>
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<td>237</td>
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<td>Jaspers</td>
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<td>263</td>
<td>278</td>
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</tr>
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<td>14</td>
<td>278</td>
<td>280</td>
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</table>

Cue-texts to be selected

The next two cue-texts contain many names and much information, but they match neither the segmenting nor the content of Avey. The pages given are approximate. Make sure you don't lose anybody. If you can't tell which module they belong in, use the earlier.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Sahakian: <em>History of Philosophy</em></th>
<th>Bentley: <em>Philosophy: An Outline History</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>From page</td>
<td>To page</td>
<td>From page</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
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<td>3</td>
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<td>4</td>
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<td>15</td>
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<td>145</td>
</tr>
</tbody>
</table>

---14--- 4.62
The final cue-text provides information in depth for only a few eras—Höffding: *A History of Modern Philosophy*.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Volume</th>
<th>From page</th>
<th>To page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
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<td>174</td>
<td>192</td>
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<tr>
<td></td>
<td>II</td>
<td>214</td>
<td>563</td>
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</tbody>
</table>
Here are images of the preprinted file-leader cards listed on page 4 of the course outline. The reverse side appears on page 4.65.
Part II: Informal Logic

Previous ERIC document: Philosophic Heuristic Instruction -- 2. ED 112 972.

Informal Logic: Error in the course syllabus, p. 9. Item #3, mid-page, should read...

3. 10.3 -- "Thinking is a..."

Page 4.67 of this issue corrects an error in the Philos....
Page 4.68 adds one new item on fallacies; it was suggested by Mr. David van Meer, a student at Skagit Valley College. Pages 4.69-4.73 provide a model response to 3/124.2.

Intermediate Informal Logic

Pages 4.74ff provide course outline and syllabus for a student-managed course, based on Michael Scriven's Reasoning.
Prerequisite: none

Performance objective(s): (i) construct deceptive, fallacious arguments (ii) avoid being suckered by same

Student materials: Capaldi, Nicholas: The Art of Deception. Prometheus Books, 923 Kensington Ave., Buffalo, NY 14215. $3

Time: 15 hours

Student should outline text and commit to memory, the list presented on pp. 185-186.
Mass Movements and Fallacy

Performance objective(s): (i) describe fanatic behavior (ii) suggest ways that public education can eliminate it

Prerequisite: Time: 25 hours.

Student materials: Hoffer, Eric: The True Believer. Harper & Row, Inc. 49 East 33rd St., New York, NY 10016 $ .75

The student should summarize the text and write an extensive essay describing a public education program in some detail that would tend to reduce fanatic behavior. Length: not less than 25 pages (handwritten) or 8 pages typed and double-spaced.
CULTS OF UNREASON

By Dr. Christopher Evans
In this book Dr. Evans takes a careful, logical look at the history and organization of several of the "nut" cults of the 20th century, with an emphasis on the more recent quasi-scientific cults of the 50's and 60's. Importantly, the first section of the book deals with Scientology, the "science fiction" religion which has made great strides in total membership in the last five years.

Evans has not left his work off at a simple overlook of each cult; he has in each case tried to give a reason for the existence of each particular cult and has done his best to give a fair, thumbnail sketch of the individuals whose personality and drive have led to the development of a bonafide cult following.

To begin with, we must examine the state of the predominate religion of the western world, Christianity, as it is in our present day and age if we are to understand why the growth of "unreasonable" cults have flourished, at least in this country, over the last two decades of our history.

Christianity has always been seen by those who practice it as a "reward later" religion, an outlook of life more concerned with the "life to come" than with the immediate day-to-day matter of living on the planet earth. In its earliest years Christians were a persecuted minority, who were concerned with an immediate situation of survival and the very real possibility of becoming a witness and perhaps a martyr to the faith. It had, in short, some very real immediate thrilling goals and possibilities for the individual Christian to strive toward in fulfilling his beliefs.
With the acceptance of Christianity by the greatest civilization of its early age, namely the Roman Empire, the religion now had a solid power base on which to build its "mine is better" outlook; until it could impose its beliefs on the larger portion of the population of the western world. By being at first a "fashionable" religion it could use the urge to conform among the population to build its numbers quickly; later, when its numbers were overwhelmingly large, it could easily stereotype all outsiders and as such justify all aggressive action toward them on the basis of hasty conclusions and unwarranted assumptions about their "pagan" religions.

Since the religion was based primarily on blind faith, the church could use its own media system to keep all "malcontents" in line by excluding them from the group (via excommunication). It was this tight control which slowed the growth of science and philosophy during the period commonly known as the "Dark Ages". However, as science and philosophy did develop in later ages, the church was racked by further upheavals, leading to the various protestant denominations which broke with the smothering traditions of the Roman based church. These various denominations, unfortunately, soon developed their own traditions, by which they silenced all arguments of their own "malcontents."

By the later part of the 19th and early part of the 20th centuries the development and discoveries of science no longer made valid the "Great Mystery" answers tradition with the Christian church (irregardless of denomination). A need was created for religions which would deal more immediately with the day-to-day problems of life, that would offer step-by-step solutions to those problems and would be more compatible with the growing body of scientific knowledge. Into this gap stepped the various cults recored in Dr. Evan's book.
VII

Scientology, the "science fiction" religion. Why does it exist and continue to grow?

This religion was originally based on a system of self-psycanalysis known as Dianetics, which was conceived in the midst of the "head-shrink" boom of the middle 50's. It offered, as a system not the religion it later developed into, the individual a chance to take a grip on his own life; to become once more the captain of his own soul, in the midst of an age where the individual was dwarfed by the threat of atomic disaster. It increased the self-image and inflated the sense of self-reliance by allowing the individual to by-pass the expensive and intimidating experts with their diploma-filled offices. In brief, it offered an algorithmic solution to life's problems as opposed to the heuristic solution offered by the Christian religion.

When it later received heat from the government, both in Commonwealth countries and the United States, it organized as a religion, one of democracy's sacred cows. It now found wider acceptance since as a religion it developed its own set of traditions, which allowed those who followed to back up their "mine is better" outlooks with a scientific sounding jargon.

Combining the "Great Mystery" attitude with the Algorithmic approach of Scientology are the UFO cults. These cults maintain the big father idea of God, except that God is now a race of superior beings who give their directions to followers through chosen "mediums" who give detailed instructions. They offer something further to their follower; the opportunity for each individual to be personally involved in the struggle between the vague, cosmic forces of good and evil. This allows the individual the chance to feel that he is applying...
direct solutions to massive problems and receive evidence of immediate results through the reports of their leaders. It lessens the responsibility of the individual for his actions by receiving "directions from above", while allowing the feeling that each individual has a grip not only on his own life, but is aiding in the direction of life in the universe. The follower saves face by "knowing" that answers will be revealed, step-by-step as he goes along and as such doesn't have to spend a lot of time seeking solutions for himself and what solutions he's confronted with he has stereotyped guidelines to lead him to answers he will find acceptable to his set beliefs.

Black Box cults offer not only the algorithmic answers of Scientology and UFO cults but goes further by offering a tangible, physical isomorph. You face the problems, grasp the box and turn the knobs; thereby solving the problems by positive action. Furthermore it is a technological isomorph and the average citizen of western world is conditioned to technological "wonder treatments" for almost every problem of the human being.

Mystic cults from the east (and the pseudo-east) are popular in the western world, because individuals raised in the Christian tradition who find the system doesn't work for them assume that the system, not the application, is at fault. Finally past the "mine is better" and the stereotype stage, they find themselves with lack of information about eastern religions; feeling that another system may contain more complete information, geared more to individuals than to the collection plate, they seek out the eastern gurus. Many times, after receiving the information they find that their first ideas about eastern religions were hasty conclusions.
INTERMEDIATE INFORMAL LOGIC. Course Outline by Walter A. Coole, Skagit Valley College

Skagit Valley College Course Number: Philosophy 253
Quarter Credits: 3 .......... Semester credits: 2
Average student completion time: 100 hours

GOAL. In the prosecution of this course, the student should extend his general problem-solving skills beyond the mastery-level attained in the basic course of study; specifically in argumentation.

When the student is expecting to transfer from Skagit Valley College to Washington State University, this additional course provides for comparability of our informal logic course to theirs—which is a 5 semester hour course.

PERFORMANCE OBJECTIVES. Upon completion of this course, the student should:

1. improve his skill in (i) analyzing and then (ii) evaluating arguments and presentations of the kind found in (a) everyday discourse (newsmedia; discussions, advertisements) and (b) textbooks or lectures;
2. improve his skill in presenting (i) arguments and (ii) reports and instructions, clearly and persuasively;
3. improve his "critical instincts", that is (i) his immediate judgements of and (ii) attitudes towards, communications and behavior of others and himself, so that he consistently approaches them with (a) the standards of reason and (b) the attitude of reasonableness;
4. improve his knowledge about the facts and arguments relevant to a large number of important contemporary issues in politics, education, ethics, and several practical fields.

METHODOLOGY. This course takes into account the discursive context of most practical reasoning. For that reason, it is taught only by student-managed groups of not less than two.

PREREQUISITE. Informal Logic

*Reproduced from the text by permission of the author, Michael Scriven.
STUDENT MATERIALS.

Scriven, Michael: Reasoning. Edgepress, 1384 Queens Rd.,
Berkeley, CA 94708
Coole: Syllabus for Intermediate Informal Logic
Notebook, paper, pencil, dictionary
Your GOAL for this course will be to develop the ability to produce and evaluate informal arguments; i.e., reasoning to sound conclusions.

This course of study has a definite prerequisite. In order to enter this course, you must have completed the Open Classroom course, Informal Logic. This background will provide you with:

- the ability to conduct independent study successfully
- the subject-matter background necessary to understand what the textbook author assumes you to know at the beginning of your studies

The METHOD used will be a new one to many students: student-managed seminar. This method has been chosen because of the author's (correct) belief that informal argumentation is a social technique among peers. After all, if there's a definite authority among a group, one needn't ever argue—Big Brother will provide the Truth!

Therefore, you should have identified at the beginning of the course, which students you will work with; when and where you will meet; and how your group will be structured. A "group" consists of at least two students.

If you do not have confidence in your fellow students to work with you, postpone your work—and don't enroll—and don't attempt to start until you can recruit some kindred spirits.

COURSE MATERIALS

This syllabus
Scriven, Michael: Reasoning. Edgepress, 1384 Queens Rd.
Berkeley, CA 94708.
Notebook, paper, pencil, dictionary

YOUR PROGRESS THROUGH THE COURSE

There are seven substantive units in this course; each is associated with a chapter in the textbook. (Chapter VIII will be treated separately at the end of this syllabus.)

Your first chore will be to allocate the available time so that you will complete the course by the end of the enrollment period; this should be done by the group first—and then by each individual. Individuals may work ahead of the group, but not behind the agreed-upon schedule. Record your target dates in the space provided on the next page.

---1---
Now, read in the first few pages of the text:

The Aims of the Book
To the Student
To the Instructor

and respond to the following items as you did in the syllabus for Informal Logic...

1. Scriven intends the student to reach the following objectives:

   (1) to improve skills in (i) ___________ and then (ii) ___________ of the kind found in (a) ___________ and (b) ___________.

   (2) to improve skills in ___________ arguments, reports and instructions.

   (3) to improve "critical instincts", i.e. (i) ___________ judgements and (ii) attitudes toward communications and behavior of people so that they are consistently approached with (a) ___________ and (b) ___________.

   (4) to improve ___________ about facts and arguments.

2. T-F. Scriven claims that the foregoing objectives are practical and broad.

3. What is offered for the best criticism submitted?

4. T-F. "A quizzes" may be used as unit pre-tests.
Note to the Open Classroom Student:

We're caught in an ambiguity of roles; fortunately, we have a simple way out.

Professor Scriven wrote the text as a teacher device for a more-or-less traditional, authority-directed instructional program. In the Open Classroom, students take over some of the role of the instructor: namely--

In lieu of the instructor presenting information, the student reads it for himself.

Students are responsible for diagnosing snags and trying to work around them; the instructor is simply one of the resources he uses to solve his problem.

Students set the pace.

for these reasons, it's important for you to read the remarks addressed to the instructor--in our case it applies to you, the autonomous student.

5. T-F. In the conventional model of instruction, there is only one way that the text can be used.

6. What does Scriven believe about the subject of informal logic? ii.1, ii.2, ii.3

7. T-F. The principle of transfer of learning is widely recognized to be a reliable empirical law.

8. What is the only way to improve reasoning skills? ii.3, ii.4, iv. 1

9. What does almost every real argument involve?
   a. conflict
   b. assumptions
   c. winning and losing
   d. (a) and (b), but not (c)
   e. none of the foregoing

10. With respect to the distinction between "inductive" and "deductive", Scriven...
   a. distinguishes between them
   b. argues that the distinction is sharp.
   c. denies the distinction
   d. (a) and (b) but not (c)
   e. (a) and (c) but not (b)

11. What are students expected to do about the numbered sections of the text?
ANSWERS

1. (1) (i) analyzing  (ii) evaluating (a) everyday discourse  (b) textbooks or lectures

(2) presenting

(3) (i) immediate (ii) (a) standard of reason  (b) attitude of reasonableness

(4) knowledge

2. True

3. A prize of not less than $250.

4. True

5. False

6. i.2—I believe this is the most...

7. False

8. iii.3—It is for these reasons that I believe the...

9. b

10. a

11. Write in titles for the numbered sections of the text. (Surprise! This direction is in the second paragraph of "To the student").

As you study each chapter of the text, do the following things:

1. Read the text, summarizing by writing titles for each numbered section.

2. Check your mastery of the chapter by completing the "A-quiz". After you complete each item, uncover the answer and check yours against it.

3. Complete the "B-quiz" in draft form as preparation for your group meeting.

4. At your group's meeting, the main order of business should be consolidating your answers to the "B-quiz" into a composite paper, representing the group's answer to each question. These group papers should be submitted as your group progresses through the course. (You should keep your own copy of the group's joint effort).

5. To qualify for a grade of "A", complete and submit the "C-quiz" for each chapter as you progress through the course.
Your answers are expected to draw heavily on the text for techniques and standards; whenever appropriate, you should cite the text, by section, to indicate which part you are applying.

You are expected to recite at each meeting with the instructor according to the "Protocols," citing as your current objective, one specific item from "The Aims of the Book".

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**COMPLETING THE COURSE**

Upon completing Chapter VII, you should assemble all papers: "A-Quizzes", individual drafts for the "B-Quizzes" as well as your copy of the group effort, and perhaps "C-Quizzes".

Submit these to the instructor. He may wish to discuss some part of the course. If so, you are expected to be able to demonstrate your mastery without long pauses.

---

**WHAT'S NEXT?**

Read Chapter VIII for some general ideas.

To find out what's available in the Open Classroom, see your instructor.
PART III: Formal Logic

Elementary Formal Logic

Course outline: add to Other Materials Required... (page 3)

Polecat Logic Bailout Kit # 2: 'UNLESS'
Polecat Logic Bailout Kit # 4: Existential Instantiation

Course syllabus: insertions

Page 47, after the first sentence and before "Lesson 6":
(Optional) Polecat Logic Bailout Kit #2: 'UNLESS' may allay your suspicions about translating that word as 'v'.

Page 58, after line 10 and before "Exercises: KM, p. 105..."

(Optional) Polecat Logic Bailout Kit #4: Existential Instantiation explores an ordinary-language use of the rule and takes note of the disastrous possibility entailed in ignoring the rule's restriction.

Pages 4.82ff are provided as a means of explaining to non-logician colleagues why the study of formal logic has current importance.
This essay is concerned with stating the goals of a course in formal, symbolic logic in a general education curriculum.

The value of a general course in problem-solving, informal reasoning, and common fallacies seems obvious to me; in order to call oneself educated, one must know how to think. But I am not treating, herein, with "informal logic"—rather, with the place of formal logic in the liberal-arts curriculum.

First off, I'd better make explicit what kind of a course is being advocated: a lower-division course that treats with sentence relations and assertions; more technically speaking, the sentential and predicate calculi. Such a course, taught by conventional methods, includes about fifty hours of classroom instruction, demonstration, and discussion of the subject matter's significance and application. In an individualized, "systems" course of formal logic, the average qualified student will spend about 160 hours' study to attain about the same degree of mastery.

Historical notes. From the institution of the Boethian Trivium in medieval universities to the beginning of the present century, Aristotelian deductive logic was part of the standard curriculum. Students were to understand the rules of discourse before taking up the serious study of philosophy.

John of Salisbury, in his Metalogicon, a polemic on logic instruction, aired in a thorough, pungent way, the purpose of natural-language logical studies.

By the early 1900's, Aristotle's logic was commonly understood among literati that it was taken for granted that everybody thought in its terms "naturally." By the early 1920's, the study of syllogistic logic had withered away—I'd suppose because it seemed that what came naturally needn't be taught when the growing curriculum was stuffing the fixed space of supposedly finite academic years.

I, for one, don't mourn the passing of natural-language logic; I'm quite happy that it's gone. Now, there's curricular space for the fully symbolic innovations of Frege, Boole, etc.

An Epicurean Invitation. Logic is a chimera: at some times, it is an efficient method of data-processing; at others, a dignified Latin slapstick to apply to the backside of audacious authority. But to many, it is a simple delight—a vehicle for taking trips into realms unknown to non-logical squares.
Liberal education should train one to enjoy many things.

The enjoyment of logical operations—derivations and translations from English to logical symbolism—are functions of the teacher's approach and students' initial attitudes. When both these variables are favorable, formal logic has a straightforward, intrinsic, aesthetic value. It's fun!

Deliberately Created Language. In addition to the call of logical lorelei, there are sound prudential grounds for the study of formal logic; Leibniz proposed such grounds in his prolegomenon. During his career, Leibniz was witness to contentions at several levels of discourse. He proposed a system of logical, inferential computation, based on a deliberately constructed language. Implicitly, Leibniz palpitated the culprit: natural language; e.g., English, German, Coptic.

No, I'm not demanding the abrogation of speech of Chaucer and Shqw. The natural languages are indispensable in certain areas of human endeavor. But however useful they are in some activities, they fail miserably in others.

Instance: did you ever try to tell, in words, how a tune goes?

Fundamentally, the natural languages are the issue of uncalculating, neolithic people—both vocabulary and syntax. (Yea, even the brand of natural language spoken by college professors!)

The natural languages just weren't intended to be used as modern man often attempts to use them; they don't express quantity very well; they don't depict inferential relationships very clearly, either.

They were originally oral-transmission behavior patterns. Speakers communicated verbally and linearly, dynamically and simply.

Whereas neolithics had nothing complicated to say, moderns do. Neolithics, as individuals, confronted members of their own primary group; modern individuals spend much of their time in the company of members of secondary groups—often communicating indirectly to a much larger number of people.

Primitives almost never question their linguistic habits. Moderns (especially lawyers, managers, and philosophers) make lifelong careers of tackling linguistic problems.

True, modern English has evolved some syntactic words that encode some pretty complex logical relationships. It seems to require the trappings of set-theory and probability to express "even if", "notwithstanding", and "characteristically". That's the point. Being so terse, the logical complexity of such terms is often glossed over.

At time, my students have difficulty learning to translate from English formulations to logical symbolism. I sometimes rationalize my failures as a teacher by blaming the student's ignorance of his mother tongue; but perhaps this is a bit more than whole-cloth rationalization. Students often report a perception of their own
learning successes by announcing an increased awareness of the power of syntactic words in our language.

In contrast to the primarily spoken natural language, formal symbolization was developed to be written. To appreciate the advantage of a written language, contrast statements of the Pythagorean theorem in English and algebraic formulations.

But beyond simple expression of certain ideas, formal logic facilitates the drawing of inferences, and displaying the validity of arguments. Natural-language arguments are, from psychological necessity, simple: Formal logic's capacity to represent a chain of reasoning all at once allows for the communication of considerably more complex inference-chains; in fact, demonstrations of any complexity desired.

Thus, a canon in this logician's statement of faith:

The artificial language of symbolic logic, along with its procedural lore, can extend human capacity for communication; such extension is needed for modern man, who lives in an environment which is cosmopolitan, technological, and densely populated--and in such an environment, the natural language is insufficient to man's communication needs.

Computers and data processing. Man didn't create machinery; it happened the other way around.

Our species evolved from lower-order primates who already had rudimentary tools. Artifacts were part of the environment that shaped the evolution of homo sapiens.

I don't understand Luddites. Do they really want to destroy all machines and leave us naked and empty-handed on a planet that can't support a tenth of us in an uncultivated ecology?

For several millennia, smart folk have used gadgets to reckon with. Anything that can be calculated by rote can be mechanized--and should be. Even the rote and routine of human communication should be done with computerized "interface". I don't really care if the telephone company, its switching mechanisms, and its computers love me. All I want them to do is route my calls to the right places and avoid errors in toting up the bill.

Since the mid-century, we've rigged up methods to handle a great deal of such trivia with computers: commercial billing, address-routing, daga-juggling, and information retrieval.

Personally, I believe that in the future, computer-programming will become a skill as common as driving an automobile is now. Practically everyone will do it; and those who don't will be thought a bit eccentric. But even for those who don't program computers, there'll be the problem of living with the data they produce. And in order to assess computer-processed data intelligently, one must appreciate the concepts of logical entailment and linguistic truncation. These concepts can be learned in the study of formal logic,
Exhortations. At the 1960 International Congress for Logic, Methodology, and the Philosophy of Science, I remember two men especially: J. M. Bochenski and Mario Bunge. They both warned that a trickle of superstition and irrationality would grow to a tragic flood if logicians didn't become more effective teachers.

"The myth-mongers and obscuritants are abroad again," said Bunge.

While I won't claim that universal study of formal logic is a panacea for civil disorders, I'm convinced that irrational discourse tends to aggrivate many of the difficulties we have. In my own career, I've seen a number of confrontations that could have been mitigated had the parties been clear in their thinking and speech. I believe that training in formal logic would have been operant skills in those circumstances.

But proclivity for sweet reason is not the sort of thing that's imparted in stress-loaded circumstances; it's acquired in the relative calm of an academic setting—or else it isn't imparted at all.

Peirce, in "Fixation of Belief," called methodology an intellectual tool-kit and intimated that it was best learned in school.

At one time, not too long ago, formal logic appeared to be a plaything for cerebral types. Well, OK: elegant tools are delightful to the hand and elegant intellectual tools are delightful to the mind.

But human communication needs have pressed us beyond the limits of our natural language's capacity. A man whose language capability is inadequate to his needs is neither emancipated, enlightened, nor educated.

The language of formal logic and its calculus provide an essential step to full education.

Christmas, 1968.
OLEANNA MATH PROGRAM

Oleanna Math Program

Previous ERIC publications:

Oleanna Math Program Materials  ED 103:088
Oleanna Math Program Smorgasbord--I ED 103:089

Changes

ALL EXTANT COURSE OUTLINES: Eliminate "Automata Student Response Card" from lists of student materials.

COURSE SYLLABI:

Pre-Algebra, Standard Path, p.3, para. 3, the first and second sentences should read:
You may take this test at any scheduled conference or by appointment. You'll need standard notebook paper and pencil.

Basic Algebra, Review Path, Part II, p. 2: delete the third sentence.

Basic Algebra, Standard Path, p. 3: the second sentence of the fourth paragraph should read:
You'll need standard notebook paper and pencil.

Plane Geometry, p. 2: from the last sentence, delete "...a 50-entry answer form."

Intermediate Algebra, Standard Path, p. 3, para. 2, the third sentence should read:
You'll need standard notebook paper and pencil.

Functions & Relations, Standard Path, p. 1, change...

III 7

to III 7 (Sections 7.4 and 7.5 optional)

Page 2, the first sentence of the next-to-last paragraph should read:
You'll need standard notebook paper and pencil.

Periodic Functions, Standard Path, p. 2 the first sentence of the next-to-last paragraph should read:
You'll need standard notebook paper and pencil.

Analytic Geometry, Standard Path: The text for this course is now out of print. A new course outline and syllabus will be produced for
New entries for the Smorgasbord file: pp. 5.3-5.9.

A new sequence, fifteen one-credit units on the history of mathematics, has been developed. The course outline, syllabus, etc. are included: pp. 5.10-5.31.

In addition to the "standard path" and the "review path", there's a "quickie review" listed in the Smorgasbord (1/18-1/31). Pages 5.32-5.34 provide a reference chart for users who are too late to get a copy of the publisher's freebie.
1/34

Basic trigonometry

Performance objective(s): measure angles in degrees and radians; convert between degrees and radians; measure and use table-lookups for tangents, sines, and cosines; compute angles and sides of triangles.

Prerequisite: basic algebra

Time: 29 hours


1/35

Rational Number Theory

Performance objective(s): prove general statements about rational numbers.

Prerequisite: Intermediate Algebra

Time: 17 hours


Number Systems

Performance objective(s): interpret statements involving the following kinds of sets: \(N, I, R, R^*\).

Prerequisites: Intermediate algebra  
Time: 17 hours


Allied Health Mathematics

Performance objective(s): perform mathematical operations required to undertake the study of health occupations: fundamental operations on rational numbers, percentage, convert between English & metric systems.

Prerequisites: basic arithmetic  
Time: 13 hours


Teachers' materials: answer booklet.

Student should complete and submit all written work.
Performance objective(s): apply calculation skills to: use the slide rule, collect data, construct graphs, and analyze quantitative problems.

Prerequisite: Intermediate algebra

Time: 2 hr/ chapter

(13 chapters)

Student materials: Aldridge, Bill G.: Quantitative Aspects of Science and Technology. Charles E. Merrill Books, Inc. 1300 Alum Creek Dr. Columbus, Ohio 43216. $7.

Teachers' materials: Solutions Manual for Quantitative Aspects of Science and Technology.

Student should turn in, NEATLY HANDWRITTEN, solutions for all problems in each section.

Performance objective(s): work intuitively, with considerable ease and familiarity, in the metric system, estimating and using metric units.

Prerequisite: pre-algebra or basic arithmetic

Time: 20 hours


106
- Not-Quite-So-Quickie-Review

Performance objective(s): refresh pre-calculus mastery

Prerequisite: prior mastery through periodic functions

Time: 20 hours/mod

This Package contains five softbound texts designed for the standard College Algebra and Trigonometry course. These modules can be purchased as a complete package or individually, according to class needs.

**MODULE I: FUNDAMENTALS**

For students who require a more gradual beginning to college algebra, **MODULE I** reviews topics usually covered in intermediate algebra.

**MODULE II: EQUATIONS** and **MODULE III: FUNCTIONS**

**MODULES II** and **III** cover the standard college algebra topics including such optional ones as mathematical induction and systems of equations in Echelon form (these can be omitted without loss of continuity).

**MODULE IV: TRIGONOMETRIC FUNCTIONS: THEORY** and **MODULE V: TRIGONOMETRIC FUNCTIONS: APPLICATIONS**

For college algebra courses that include trigonometry, **MODULE IV** presents theory utilizing a circular function approach along with reasons for the importance of this approach, while **MODULE V** consists of trigonometric applications.
Performance objectives: (i) recognize "real life" problems which are amenable to statistical solutions (ii) select and apply specific statistical tactics for attacking such problems—with ease

Prerequisite: Probability & Statistics  Time: 20 hours

605 Third Ave. New York, NY 10016. $7.

Teacher materials: Instructor's manual.

Student should work all exercises in the text—(a), referring to Burlington's Handbook of Mathematical Tables and Formulas for needed formulas and methods if not immediately recalled (b) checking results periodically, correcting errors

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Performance objective(s): estimate metric quantities with ease—in a manner similar to intuitive use of Imperial quantities—without using conversions; in other words, as the SI system will be used when fully adopted for everyday usage

Prerequisite: pre-algebra  Time: 10 hours


(N. B. Local source for Skagit County: Dutchie Books, Ltd. 919 Robson St. Vancouver, BC, Canada V6Z 1A5. Telephone: (604-684-4496) ATTN: Shelly Mason.)
Graphs & Tables

Performance objective(s): Interpret graphs and tables correctly

Prerequisite: Intermediate Algebra

Time: 20 hours


Trigonometry with Applications

Performance objective(s): Graph & use functional curves; compute amplitudes & periods; relate trigonometric functions to complex numbers in CI & polar form; perform operations on complex numbers

Prerequisite: Basic algebra and 1/34

Time: 27 hours

More Statistics & Probability

Performance objective(s): Master the content of the basic course more thoroughly

Prerequisite: Probability & Statistics

Time: 100 hours

Student materials: Byrkit, Donald R. Elements of Statistics. D. Van Nostrand. 450 West 33rd St., New York, NY 10001. [and Student Self-Study Guide]

Linear Systems & Programming

Performance objective(s): perform various linear-system computations; apply algebra to linear programming & polynomial interpolation

Prerequisite: Functions & Relations

Time: 20 hours


Student should submit all exercises.
The course outlined in this paper consists of fifteen one-credit modules corresponding to conventional historic periods, thus:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Period</th>
<th>Era</th>
<th>From</th>
<th>To</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-Greek</td>
<td>Pre-history</td>
<td>3000 BC</td>
<td>200 BC</td>
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<tr>
<td>2</td>
<td>Ancient</td>
<td>Early</td>
<td>800 BC</td>
<td>300 BC</td>
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<tr>
<td>3</td>
<td></td>
<td>Late</td>
<td>300 BC</td>
<td>600 AD</td>
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<td>4</td>
<td>Medieval</td>
<td>Other cultures</td>
<td>200 BC</td>
<td>1400 AD</td>
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<td>5</td>
<td>Western</td>
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<td>200 AD</td>
<td>1400 AD</td>
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<td>6</td>
<td>Renaissance</td>
<td></td>
<td>1300</td>
<td>1580</td>
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<td>7</td>
<td>Baroque</td>
<td>Early</td>
<td>1500</td>
<td>1650</td>
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<td>High</td>
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<td>9</td>
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<td>Late</td>
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<td>10</td>
<td>Modern</td>
<td>Enlightenment</td>
<td>1700</td>
<td>1790</td>
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<td>Romantic</td>
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<td>Scientific</td>
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<td>Reconstruction</td>
<td>1890</td>
<td>1910</td>
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<td></td>
<td>Recent</td>
<td>1910</td>
<td>1955</td>
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<tr>
<td>15</td>
<td></td>
<td>Contemporary</td>
<td>1955</td>
<td>Present</td>
</tr>
</tbody>
</table>

Average student completion time for each unit: 30-50 hours.

**PERFORMANCE OBJECTIVES**

On completion of a module of this sequence, the student should be able to...

*without memory-aids:*

1. recognize prominent mathematicians & mathematical topics of the era, giving approximate dates, locales, and brief summaries of mathematical work;

2. relate the mathematician and his topics to general history loosely;
3. give exact dates, locales, and important biographical details bearing on the mathematical works;

4. list and summarize mathematical investigations;

5. tell what historical and mathematical events influenced the mathematicians thinking;

6. list some important applications of the mathematician's teaching.

The memory-aids from which the student works will include a detailed chronograph with a scale of 4cm/annum and a working file of 12 X 20 cm (5" X 8") cards. All memory-aids must be the student's own work and must appear in the format specified in the syllabus.

DISCUSSION

Literature on teaching the history of mathematics is sparse and varies considerably in evaluating such accomplishments.

The most adverse opinion holds that this kind of historical knowledge is without merit for any purpose; but doesn't claim that any harm comes to the student who acquires doxographic knowledge of the history of mathematics.

The most favorable authorities assert that doxological knowledge is a necessary background for "in-depth" historical studies. 2. Carricchio, Ettole: Mathematics and Logic in History and Contemporary Thought. (Tr. Isable Quigley) Faber & Faber.

The purpose of this sequence is to provide the academic mathematics major and the persistent amateur with the ability to conduct such in-depth study, thoroughly grounded in a knowledge of historical context.

ENTRY REQUIREMENTS AND SEQUELA

A student, entering this sequence, should be an accomplished academic learner, able to write well, read difficult prose, outline and summarize quickly, and grasp sequences of events as a whole. A fair knowledge of general history is essential; ie. good performance in "world civilizations" courses.

1. a DOXOGRAPHIC history of mathematics places in chronological order: biography, major conclusions, historic events—noticing "successions" or in familiar, but misleading terms, "schools"
Within the discipline, the student should be able to...

identify concepts
summarize ideas
analyze
evaluate
classify, according to disciplinary sub-topic:
concepts
ideas
mathematical literature

The ability to type is of considerable utility, but not essential. Upon completing the historic survey of a given era, the student may suspend pursuit of this sequence in order to study, in depth, a mathematician or a concept or attend advanced classes in lecture or seminar.

The latter activities should be encouraged to satisfy the need for more than doxographic history.

MATERIALS

*Items marked with an asterisk are conveniences to improve appearance of the time-line and reduce student time involved with mechanical operations in constructing the time-line.

Brand-names are given as indications of the item needed, but aren't essential.

Print Materials

World Almanac. (Current year.)
Webster's Biographical Dictionary. Mirriam-Webster.
**For card-file**

Pre-printed file-leader cards, 12 X 20 cm (5" X 8")
Index cards,
Index file dividers, alphabetic -- 2 sets
Index card-file box, 12 X 20 X @20 cm (@8" deep)
Two colored felt-tip pens (broad-tip) -- any two colors
Fine-line black pen (ink or ball-point)
(Optional) Portable typewriter
Long file-card storage boxes

**For chronograph**

Brown wrapping paper @1 meter wide (30-42")
Length: 4 meters for each century covered in the module
Red finepoint felt-tip pen
Meter-stick
Long table
Liquid paper, buff-colored; Liquid paper thinner
Red Mystic tape or builder's tape -- @5 cm (2") wide

*Two pieces of wood, 5 X 5 cm (2") @45: cm long (18")
*Chronograph rubber stamp 4cm/annum
*Red rubber stamp pad
*Serial numberer-stamp, with red ink
*Dennison Pres-a-ply Removable Labels, 5 X 10cm (4" X 4")
*Dennison Red file folder labels
*Chronograph stamp-aligning template: plywood

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Syllabus: History of Mathematics -- Walter A. Coole
INTRODUCTION

This syllabus will guide you through fifteen "eras" of the history of mathematics. Each era will require from 30 to 50 hours' study.

Through the study program outlined, you'll gain a knowledge of history that's described as DOXOGRAPHIC: you'll be able to place mathematicians and their investigations into temporal and tradition sequences. Doxographic knowledge of the history of mathematics is not a full education in history, but it's a necessary basic.

In accomplishing your work, you'll build a time-line in grand scale and outline the investigations of many mathematicians in some detail. This "tour" of mathematics should lead you to encountering some great thinkers who have had ideas that you'll find interesting and useful. Having identified them and learned something of their historic surroundings, you'll then be well equipped to select a few for more intense study.

OBJECTIVES

Upon completion of a module of study—an era—you'll be expected to...

without memory-aids:

1. recognize prominent mathematicians of the era, giving approximate dates, locales, and brief summaries of mathematical investigations;

2. relate mathematical thought to historic events;

with memory-aids:

3. give exact dates, locales, and important biographical details bearing on mathematical investigations;

4. list and summarize mathematical tracts;

5. tell what events influenced mathematical history;

6. list important applications.
The memory-aids from which you will be working will be entirely of your own construction; by following directions in this syllabus, you'll produce neat, stylized memory aids which will serve you later in further work as a historian of mathematics. It may be that later, you'll decide that the materials aren't of much utility, but the process of producing them will have been the significant outcome; because the work involved will take you through an intellectual experience that's unique to you—and a lot more fun than lectures!

Your memory-aids will consist of:

--a chronograph (time-line) about 1 meter wide with a scale of 4 cm/annum*

--a card-file summarizing important factual information about the mathematical history you'll be studying

MATERIALS

Print materials. These materials include all books needed for the whole 15-unit sequence; many are quite expensive. I'd suggest that you not buy any of them at first. Locate them in the Open Classroom and the college library. After you've completed two or three units, you'll be able to see what you want for your own and which you can conveniently use in other locations.

World Almanac. (Current)
Webster's Biographical Dictionary. Mirriam-Webster.

*At the time this syllabus is being written, 1976, we're just about to go METRIC; ergo, this will be a metric syllabus. 1 meter = .39"; 1" = 2.5 cm; 5" X 8" index cards become 12 X 20 cm index cards.
For your card-file. You'll need to purchase all of these...
12 X 20 (5" X 8") Index-card dividers with blank tabs.
12 X 20 index cards
Index file dividers, alphabetic: you'll need a second set at the beginning of the second module.
Index card-file box, 12 X 20 X @20 for the current module's cards; some boot boxes work out fine.
Fine-line black-pen: ink or ball-point
Broad-tip felt pens: any two colors, preferably black and red
(Optional) portable typewriter
Long 12 X 20 card-file boxes -- beginning with the second module, you'll need several to store cards generated in previous units' work separately from the current work.

From the instructor: pre-printed 12 X 20 file-leader cards -- a handful

For your chronograph. This grand-scale time-line study will be brown paper (which doesn't show light pencil marks) -- done in red and white, both of which stand out well visually. For a start, purchase only these items:

Red fine-point pen: ink or ball-point
Red narrow felt-tip pen
Liquid Paper, buff-colored and Liquid Paper Thinner -- for corrections
#2 lead pencil
Two pieces of wood, 5 X 5 X 45 (a couple of 2-by-4's will work) -- to hold the rolls of paper down
Dennison Pres-a-ply Removable Labels, 5 X 10
Dennison Pres-a-ply file folder labels
IBM-Flowcharting Template, good paper-cutting scissors
Narrow (8' 3 cm) Scotch tape, non-yellowing

And locate a long table to work on.

Other materials you'll need are available in the Open Classroom; locate them all now...

Brown wrapping paper @1 meter wide. Length: 4 meters for each century covered in the module, plus 2 meters spare
Meter-stick
Tape: red Mystic or builder's tape 5 cm wide
transparent Mystic tape 5 cm wide
Chronograph rubber stamp
Long rubber-stamp pad
Serial-numberer
Template
10+ meter tape measure
A PRELIMINARY EXERCISE

Before undertaking your first unit of historical study, let's build a chronograph based on your place in history. This will get you accustomed to the mechanics of drawing a neat, stylized chronograph of convenient size. It will also provide you with a piece of material by which you can sharpen your historical depth-perception.

This chronograph will cover the years from 1750 to 2000 AD and involve your own personal biography.

Take 12 meters of brown paper. Using red 5cm tape, bind the outer edge of the roll. Measure off about a meter and begin the time-line about 25 cm from the top of the roll, using the chronograph rubber stamp and template.

Your work, laid out on a table should look like this...

5 x 5 x 45 wood blocks

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113

5.17
A closer look at the red time-line thus generated reveals something like this...

```
Jan  Apr  Jul  Oct  Jan  Apr  Jul  Oct
```

Each year corresponds to 4 cm; the first month of each quarter is designated.

Next, you're going to number the years neatly and quickly.

Select the serial-numberer and READ THE ACCOMPANYING INSTRUCTIONS THOROUGHLY. Set the number-sequence to 1749 and test it once. Note the mark on the metal that will be contacting the paper; it is an index to locate the years correctly on the time-line.

Your first two years should look like this...

```
1750  1751
Jan  Apr  Jul  Oct  Jan  Apr  Jul  Oct
```

Now, extend the time-line to the right until you reach the year 2000; bind the right edge of the paper.

Having now manipulated time-lines and rolls of brown paper for a while, you're in a position to make a decision. Do you want to keep on working with rolls of paper, or would you rather accordion-fold all of it? Remember, when you complete the whole historic study, you'll have about a hundred meters of brown paper in 15 sections.

If you decide to accordion-fold the stuff, I'd suggest that you do it in 30 cm sections. Do this before you proceed any further.

Having made the decision and acted on it, you can now begin entering historic events. Using the World Almanac's chronology section, enter all events from 1750 to the present as accurately as possible above the time-line.

Finally, using your own life-history and that of your parents and grandparents, pick out one or two events (birthdays, graduations, major moves, jobs) for each decade—as far back as you can go. A few people can get back to the 1750's with their family history.
Enter all family events below the time-line, using this shape and the red pen.

Life-spans should be marked with the red felt-tip pen with name, birth and death typed or printed on the red labels; if the person is still living, end the line with dots. Life-spans should look like this...

John Q. Doe
1900-1945

Richard M. Roe
b. 1956

When you've completed this, you should ask the instructor to inspect your work.
UNIT LEARNING PROCEDURE

A. Prepare chronograph
   1. Cut brown paper—4 meters per century plus two spare.
   2. Dr.w time-line and print years.
   3. Accordion-fold if that's your style.
   4. Enter major events from World Almanac at the top edge of the paper.

B. Survey the era being studied
   1. In the last section of this syllabus, "Periods and Assignments," note the passages indicated in Hoffman: The History of Mathematics for the era.
   2. Read each passage carefully, setting up a file-leader card for each mathematician mentioned; as you read, enter as much information as you can on the card. This is the beginning of the memory-task leading to the performance objectives— for that reason, you should review the objectives and keep in mind that you should be working toward them.
   3. Because Hofman missed a few important mathematicians in each era—as does everyone else—you'll have to double-check him against each of the other authorities.

   To make your task a bit more complex (but not impossible) there's a matter of temporal overlap. We've sequenced the modules according to Hofman's dating, using an admittedly arbitrary set of dates which happen to overlap.

   Investigate each of the texts listed for the current module of historical study, using the index and table of contents to select passages relevant to the era being studied. Set up a card for each mathematician being studied in the current module; and note each individual you've decided to postpone for the next module. Make a note of each text's passage on the back of the card.

   4. If you have in mind any mathematician who should be included, but is not, add a file-leader card for him, noting your sources under "Remarks".

C. RÉcapitulate the era (Repitition is necessary for all memory-work; this tactic will reduce the tedium by varying the activity--and sometimes revealing new information.)

   1. For each mathematician identified, read the passages you've identified for biographical information. Fill in appropriate blanks on the file-leader card for information you can obtain. If you are missing information when you complete the card and feel you need it, you can try for it in the library.

      a. Before searching the library, consult the "Pioneers' Library File" for a possible source.

      b. If it doesn't have any entries and you subsequently find something, you'd do succeeding students a favor by leaving a file-card, giving your source.

      c. For each mathematician you've identified, examine all sources for pictures and maps, showing their locales during the time of their lives. Scrutinize the pictures for clues to the time, but be wary of anachronisms.
d. Note all technical terms you encounter; be sure you can define them and use them correctly in context.

e. Identify a major locale—not usually the birthplace, but rather, the school at which the man taught or his longest residence. Underline that locale on the card.

f. Look for historical incidents and note them.

 g. As you complete each mathematician's file-leader card, make a small check in the upper left corner of the card (√).

2. Now, go through the cards again. This time, look up the locale and time in the Historical Atlas of the World (use Goode's World Atlas to supplement your geographic intuitions if you feel it necessary.) With the atlas open, read the appropriate passages of The Encyclopedia of History, making note of events which plausibly bear on the mathematician's thinking. To keep track, make a second check (√√).

3. A last review. In this step, you'll concentrate on the card-entries, 'Tradition' and 'Application'. You'll need to work on a large surface; you'll use, in addition to your card-file, some blank index cards. Note on your cards: DIRECT influences (teachers and known reading), names of mathematical "schools", and mathematicians who are known to DIRECTLY have worked from the person's writings and teaching. Smith's volume 2 is an especially good source, but there are nuggets in the others.

In some cases, your file-leader card won't provide enough space for all the information you have to say about succession and consequences. For them, start a supplementary file-leader. The mathematician's name should be written in the upper left-hand corner of the card and cards should be sequenced in the upper right-hand corner: S-1, S-2, S-3... These should be kept immediately behind the file-leader.

As you've completed this last review, and are satisfied that your information is complete, make a third checkmark (√√√).
D. Complete the chronograph
   1. Draw in life-lines thus...

   |........................................|
   |........................................|

   ...in red as you did in the practice.

   a. Exact dates are less accurate (and significant) as you proceed from the present. If you're given several years for the same event, average all dates the references provide.

   b. Information about months are seldom available for events before the modern period. Use "Jul"—mid-year if the month isn't provided.

   c. The label should contain name, dates, and major locale, thus...

   Nikolai Bourbaki II
   b. 1921
   Sedro-Woolley

   Use the red file-folder labels and locate them about mid-line.

   d. SPACE LIFE-LINES AT LEAST 5 CM. APART.

   e. During later periods, you'll find yourself running out of space—about 1700, maybe sooner. What to do? Set up supplementary strips of brown paper—the top of which will lie just a hair-line below the time-line. Along the top, make reference points, thus...

   1700

   and matching points at the bottom of the first strip—say about every 25 years (1 meter). Do this in black.
2. Enter biographic details
   a. By using the white Pres-a-ply labels, you'll eliminate a lot of messy corrections.
   b. Publications should be shown with this outline from your flowcharting template.

```
  +-------------------+
  |                  |
  +-------------------+
   The arrow, drawn to the date on the life-line, must be drawn after the label is cut and stuck onto the chronograph below the life-line.
```

c. Other events should be shown with the "display" outline, thus...

```
  +----------------------------+
  |      +---------------------+ |
  |      |                      |
  +----------------------------+
  |
  +----------------------------+
  |      +---------------------+ |
  |      |                      |
  +----------------------------+
```

d. If you have two events or publications close together, you may use this kind of offsetting; but you might consider dropping a few entries selectively—you may be trying to display too much detail.

```
  +-------------------+
  |                  |
  +-------------------+
   The arrow, drawn to the date on the life-line, must be drawn after the label is cut and stuck onto the chronograph below the life-line.
```

3. Concurrent historical events should be displayed above the time-line in "process" rectangles, with arrows indicating approximate dates...

```
  +--------------------+
  |   +---------------+ |
  |   |               |
  +--------------------+
  |
  +--------------------+
  |   +---------------+ |
  |   |               |
  +--------------------+
```

4. As each file-leader card is completed, strike the three check-marks (✓✓✓) and arrange them in the order you wish to undertake detailed study: chronological or succession order.
E. Detailed study of each mathematician's investigations is to be accomplished by assembling a "Harvard Outline" summary of his investigations, treatises, and publications. I'd suggest that you use the following outline for each topic...

(Roman numeral) (Name of topic)
A. Definitions
B. Axioms & postulates
C. Theorems
D. Methods
E. Applications
F. Other information

but you'll have to vary each topical treatment to fit the subject.

In some cases, you'll find that a topic is not credited solely to one individual. For that information, set up a series of cards labeled by topic and cross-indexed to individuals--and vice versa--and file them separately, using the blank index dividers.

1. Each card should be headed with mathematician's name or the topic on the front: upper left-hand corner. Sequence each card on the front in the upper right-hand corner: 1, 2, 3... Use both sides.

2. Use ink or type. Be exactingly neat. Abbreviations should be decipherable by any casual (mathematically trained) reader; on this order...

M mathematics
(initial) Mathematician's name
A arithmetic
L Logic, Logistic
G geometry, geometric
A Algebra
T trigonometry
C calculus
F problem

See the MLA Style Sheet and the International Dictionary of Applied Mathematics for other acceptable abbreviations.

3. As you complete each set, check the chronograph for completeness and accuracy.

4. Before you file the set of cards, I'm going to show you how to insure against the horror of a scramble deck.

At the top of the file-leader card, note eight dots; four on each side. For the time being, we'll use only the four on the left.

Take one of the colored felt-tip (broad) pens. The first set of cards filed should be marked with one strip, along the top edge of the deck. The second, two stripes; the third, three stripes; the fourth, four stripes.

On the fifth set; begin with one stripe--using the other color.

On your eighth set, you'll have unique markings for each set.
So far, so good. File these cards in the small file-box, using the alphabetical dividers.

You're now asking the question, "What happens if the next set's markings are like the one in front or behind the place where it's to be merged into the larger file?"

That's what the dots on the right-hand side are for: guides for other marking.

WHEN YOU'VE COMPLETED THE MODULE'S CHRONOGRAPH, WRITTEN OUTLINES FOR EVERYBODY, AND ALPHABETIZED ALL CARD-SETS, YOU'VE COMPLETED ALL PRESCRIBED STUDY.

EXAMINATION

You should arrange an appointment with the instructor at a time when there's not likely to be any traffic in the display area.

For the examination, you'll need your chronograph and the cards you've developed for this module. You'll need your "personal" time-line and (after the first module) the preceding module's chronograph.

First, you'll be asked to lay out the whole chronograph; the instructor will examine your card-file while you're doing that.

To test for your having met objectives (1) and (2), the instructor will select a mathematician or topic of the era and ask for a brief description.

To test for the remaining objectives, the instructor will select another mathematician or topic. You'll have a few minutes to prepare before giving a detailed account of him.

After the examination, your instructor will be interested in comparing your life-line with the era being studied.

AFTER THE EXAMINATION

When you complete the second module's work, you'll want to merge the card-sets you've developed with the first module's card-sets.

If you've completed a learning-contract and are contemplating more study, you have options:

--Continue with historical surveys of the next era OR
--Suspend historical explorations and study one of the mathematicians or topics you've met recently in depth

Either option is acceptable.

A FEW PERSONAL COMMENTS

In 1965, after having studied the history of philosophy concertedly for several months, I found myself studk for six weeks, waiting for the beginning of a job.

123
--12--
5.25
I decided to fill much of the time with constructing a chronograph roughly the same as the one described in this syllabus. The result was a bit scruffy, but essentially a usable working strip about 75 yards long.

Since the chronograph had been constructed in a one-room apartment, I'd never had the chance to unroll it full length for several months. I finally did it on an untrafficked country lane when the weather was good.

I spent the better part of a day, wandering up and down the darned thing, reconstructing everything I ever learned about the history of philosophy.

In retrospect, I decided that I wished that I'd learned philosophy's chronicle this way first. And so, when the opportunity arose, I took the opportunity to write out how I think the process of learning the history of philosophy should be done.

I've tried to include every short-cut and develop a few mechanical techniques to eliminate student effort that doesn't produce significant learning.

Perhaps not every student can learn the history of philosophy by this method—but there are plenty of "conventional teaching" programs that offer alternatives.

It must be emphasized that the doxographic knowledge of history that this program yields is not everything there is to be said about the subject. But I firmly believe that this kind of historical knowledge is essential to more sophisticated study; and that the would-be historian who attempts to skip over it would try to write books without being able to spell.

Having been successful in developing a history of philosophy, I proceeded to modify it for studying the history of mathematics. After all, the two disciplines had similar histories.

Most courses in the history of mathematics, I found, tended to dwell on the instructor's selection of particular topics for in-depth study and neglected the lives and personalities of mathematicians.

Further, the standard texts, such as the ones used in this syllabus, weren't as comprehensive as some of those found in the history of philosophy.

None the less, I believe that the student will find this method has some advantages—among them, the relative freedom of option in which directions to investigate.
<table>
<thead>
<tr>
<th>Unit of Module</th>
<th>Period</th>
<th>Era</th>
<th>From</th>
<th>To</th>
<th>Number of Centuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ancient</td>
<td>Prehistory</td>
<td>400BC</td>
<td>323</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ages</td>
<td>400</td>
<td>323</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Socrates, Plato &amp; Aristotle</td>
<td>400</td>
<td>323</td>
<td>3</td>
</tr>
<tr>
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<td>Helenistic</td>
<td>323</td>
<td>200AD</td>
<td>3.25</td>
<td>5.25</td>
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<td>4</td>
<td>Roman</td>
<td>200</td>
<td>525</td>
<td>3.25</td>
<td></td>
</tr>
<tr>
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<td>Medieval</td>
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<td>1215</td>
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<td>6.9</td>
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<td>6</td>
<td></td>
<td>Monastic</td>
<td>525</td>
<td>1215</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scholastic</td>
<td>1215</td>
<td>1350</td>
<td>1.1</td>
<td></td>
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<td>7</td>
<td>Renaissance</td>
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<td>1492</td>
<td>1.5</td>
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<td>1492</td>
<td>1600</td>
<td></td>
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<tr>
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<td>Modern</td>
<td>Early</td>
<td>1600</td>
<td>1700</td>
<td>1</td>
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<td>1800</td>
<td>1</td>
<td></td>
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<td>1800</td>
<td>1900</td>
<td>1</td>
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<td>1920</td>
<td>.25</td>
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<tr>
<td>13</td>
<td>Reconstruction</td>
<td>1920</td>
<td>1940</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>14</td>
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<td>1940</td>
<td>1963</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Contemporary</td>
<td>1963</td>
<td>Present</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I'll bet that some history teacher gave you different dates for the periods and eras shown above. Nobody has their dates straight! Wait until you get a look at the cue-texts and their assignments.

In preparing time-lines, start 50 years before "From" and run 50 years after "To". This will add another century (4 meters) to the time-span given above--then, leave a meter of blank brown paper on either side of the whole time-line.
Your basic cue-text will suggest which philosopher belongs in which module.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Volume</th>
<th>Chapter</th>
<th>§§</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>1-4</td>
<td>1-4</td>
</tr>
<tr>
<td>2</td>
<td>II</td>
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<td>3</td>
<td>III</td>
<td>5-8</td>
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<tr>
<td>4</td>
<td>III</td>
<td>1-3</td>
<td>1-3</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>4-8</td>
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<tr>
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<td></td>
<td>1-3</td>
<td>1-3</td>
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<td>7</td>
<td>II</td>
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<tr>
<td>8</td>
<td>II</td>
<td>1-5</td>
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</tr>
<tr>
<td>9</td>
<td></td>
<td>1-3</td>
<td>1-3</td>
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</tbody>
</table>

The next two cue-texts contain many names and much information; but they match neither the segmenting nor the content of Hofman. The pages given are approximate. Make sure you don't lose anybody. If you can't tell which module they belong in, use the earlier.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Eves: Chapter</th>
<th>Boyer: Chapter</th>
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<tbody>
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<td>2</td>
<td>3, 4, 5, 8</td>
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<tr>
<td>3</td>
<td>6</td>
<td>5-11</td>
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<tr>
<td>4</td>
<td>7</td>
<td>12-13</td>
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<tr>
<td>5</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>15</td>
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<td>7</td>
<td>8</td>
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<td>9, 10</td>
<td>17-18</td>
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<td>10, 11</td>
<td>19</td>
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<td>11, 12</td>
<td>20-23</td>
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<td>27</td>
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<tr>
<td>15</td>
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<td>27</td>
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</table>

The next cue-texts provide information in depth in many eras—

<table>
<thead>
<tr>
<th>Unit</th>
<th>Scott: Chapter</th>
<th>Smith-Vol. I: Chapter</th>
<th>§§</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>I</td>
<td>1-4</td>
</tr>
<tr>
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<td>IV</td>
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---15--- 129  5.28
<table>
<thead>
<tr>
<th>Unit</th>
<th>Scott Chapter</th>
<th>Smith-Vol. I Chapter</th>
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<tbody>
<tr>
<td>5</td>
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<tr>
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<td>VII-IX</td>
<td>VIII</td>
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<td>VII-X</td>
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<td></td>
<td>1-10</td>
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<tr>
<td>11</td>
<td>XII-XV</td>
<td>X</td>
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<tr>
<td></td>
<td></td>
<td>1-10</td>
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<tr>
<td>12</td>
<td>XV</td>
<td>X</td>
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<td></td>
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<td>X</td>
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<tr>
<td></td>
<td></td>
<td>1-10</td>
</tr>
</tbody>
</table>

Textbook sources in the history of mathematics given in this syllabus become sparse in the 20th century. You shouldn't take this to mean that the history of mathematics is running out—but rather that the textbooks haven't been written.

When you reach recent and contemporary eras, expect to construct your cue-lists from library research.
Here are images of the preprinted file-leader cards listed on page 4 of the course outline. The reverse side appears on page 5.31.

<table>
<thead>
<tr>
<th>NAME</th>
<th>Born</th>
<th>Died</th>
<th>Locations</th>
<th>Biographic details</th>
<th>Historic events</th>
<th>Succession</th>
<th>Remarks</th>
</tr>
</thead>
</table>

131 5.30
In addition the "standard path" and "review path" tracks through the core of the Oleanna Math Program, a high-speed review is available. It's listed in the Smorgasbord, items 1/18-1/31: The Quickie Review. Since a well-trained student should not require the amount of time reviewing this content as a student learning the material the first time, quickie reviewing should be negotiated as an independent-study sequence (at the rate of 33 hours per credit).

Here's a reference chart, adapted from the October 1975 advertising blurb of the Wadsworth Publishing Co. with their permission...

<table>
<thead>
<tr>
<th>Volume One: The Real Number System</th>
<th>Volume Seven: Systems of Linear Equations and Inequalities</th>
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<td>1. The Set of Whole Numbers</td>
<td>1. Solution of Systems Using Linear Combinations; Graphing</td>
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<td>2. The Set of Integers</td>
<td>2. Matrices and Determinants</td>
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<tr>
<td>3. The Set of Rational Numbers</td>
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<td>4. The Set of Real Numbers</td>
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<tr>
<td>1. Polynomials</td>
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<tr>
<td>2. Radical Expressions; Fractions</td>
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<tr>
<td>3. Radical Notation for Square Roots</td>
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<tr>
<th>Volume Three: Equations and Inequalities in One Variable</th>
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<tr>
<td>1. First Degree Equations and Inequalities</td>
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<td>2. Second Degree Equations</td>
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<th>Volume Four: Functions and Relations</th>
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<tr>
<td>1. First Degree Functions and Relations</td>
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<td>2. Second Degree Functions and Relations; Variations</td>
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<th>Volume Five: Exponential and-Logarithmic Functions</th>
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<tr>
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<td>2. Logarithmic Functions</td>
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<th>Volume Six: Complex Numbers: Polynomial Functions</th>
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<td>2. Polynomial Functions</td>
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<td>1. Sequences and Series</td>
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<td>2. Counting Principles and Probability</td>
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<td>3. An Introduction to Statistics</td>
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<td>2. Applications</td>
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<td>1. Periodic Properties of Trigonometric Functions</td>
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<td>2. Identities and Conditional Equations</td>
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<tr>
<td>3. Trigonometric Form of Complex Numbers; Polar Coordinates</td>
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<tr>
<th>Volume Eleven: Analytic Geometry in R²</th>
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<tr>
<td>1. Linear Functions and Relations</td>
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<td>2. Non-linear Functions and Relations</td>
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<td>3. Special Topics</td>
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<th>Volume Twelve: Analytic Geometry in R³</th>
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<tr>
<td>1. Three Dimensional Geometry</td>
</tr>
<tr>
<td>2. Vectors in Two Dimensions</td>
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<tr>
<td>3. Vectors in Three Dimensions</td>
</tr>
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ELEMENTARY ALGEBRA
Volumes 1, 2, 3: 44 sections and 9 review units. Volume 4: 11 sections and 2 review units may be used if time is available.

INTERMEDIATE ALGEBRA (Track I)* Volumes 4, 5, 6: 35 sections and 6 review units. Volume 7: 11 sections and 2 review units may be used if time is available.

INTERMEDIATE ALGEBRA (Track II)‡ Volumes 2, 3, 4, 5: 53 sections and 9 review units. Volume 6: 10 sections and 2 review units may be used if time is available.

COLLEGE ALGEBRA (Track I)* Volumes 6, 7, 8: 33 sections and 7 review units.

COLLEGE ALGEBRA (Track II)‡ Volumes 4, 5, 6, 7, 8: 46 sections and 8 review units. Part of Volume 8: 12 sections and 3 review units may be used if time is available.

MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCES (Track I)* Volumes 4, 5, 7, 8: 48 sections and 9 review units.

MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCES (Track II)‡ Volumes 2, 3, 4, 5, 7, 8: 76 sections and 14 review units.

TRIGONOMETRY
Constitute a complete course in trigonometry.

COLLEGE ALGEBRA AND TRIGONOMETRY (Track I)* Volumes 6, 7, 8, 9, 10.

COLLEGE ALGEBRA AND TRIGONOMETRY (Track II)‡ Volumes 4, 5, 6, 7, 8, 9, 10. Part of Volume 8 may be used if time is available.

ELEMENTARY FUNCTIONS (Track I)* Volumes 6, 9, 10, 11: 49 sections and 10 review units.

ELEMENTARY FUNCTIONS (Track II)‡ Volumes 4, 5, 9, 10, 11: 60 sections and 12 review units.
ANALYTIC GEOMETRY
VOLUMES 11, 12: 25 SECTIONS AND 6 REVIEW UNITS.

*TRACK I: GOOD BACKGROUND IN PREREQUISITE ALGEBRA COURSES.
†TRACK II: POOR BACKGROUND IN PREREQUISITE ALGEBRA COURSES.
Previous ERIC documentation: ED 112 974 JC 750 525

Add to course outline: Page 4...

A source for Ralph Nichols' recording, "Listening Is Good Business":

Edward M. Miller Associates, Inc.
1221 McKay
Grand Rapids, Mich.

Pages 6.2ff provide additions to the Tiger Learning Skills Project file.
Performance objective(s): prepare various kinds of research assignments in political science

Prerequisite: several courses in political science  
Time: 10 hours


Student should outline the text. The following should be in detail: Part I; the remaining portion should include all entries from the table of contents, with such information as the student feels useful.

Performance objective(s): prepare various kinds of research assignments in economics.

Prerequisite: several courses in economics  
Time: 20 hours


Student should outline in the text: detail--I-IV, VI-VII. Part V should be listed directly from the table of contents.
Plant Cycles

Performance objective(s): compare plants to animals; master basic concepts of plant biology

Prerequisites: Time: 9 hours


Medical Vocabulary

Performance objective(s): give definitions and recognize meanings of common technical words

Prerequisites: Time: 15 hours

Performance objective(s): prepare various kinds of research assignments in psychology.

Prerequisite: several courses in psychology. Time: 15 hr.


Student should outline the text in detail: I, pp. 1-40; III. Other portions should be listed as in the table of contents with amplifications.

Performance objective(s): prepare various kinds of research assignments in women's studies.

Prerequisite: general academic sophistication. Time: 15 hours.


Student should outline the following portions in detail: I-III, p. 20; V, pp. 64-70; VII; VIII. Other portions' outline should be listed as in the table of contents, with amplifications.
Performance objective(s): interpret English words of Greek and Latin origin, using roots, prefixes, and suffixes

Prerequisite: 
Time: 16 hours


Performance objective(s): master key biological concepts and see relationship of biological science to problems of health

Prerequisite: 
Time: 10 hours

Electrical Theory.

Performance objective(s): recall basic theory of electricity.

Prerequisite: Basic Algebra

Time: 13 hours


Student should submit all chapter self-tests, scored.

Anatomy

Performance objective(s): recall basic systems of the human body and describe how they interact.

Prerequisite:

Time: 15 hours


Student should submit all chapter self-tests and final examination.
Performance objective(s): master basic concepts and vocabulary of plant structures

Prerequisite: Time: 10 hours

Student materials: Stevenson & Mertens: Plant Anatomy.
John Wiley & Sons, Inc. 605 Third Ave. New York, NY 10016
$5.
This new section of the *Greenbook Abstract & Catalog* documents a previously undocumented Open Classroom effort, providing an unstructured, ad hoc source of self-instruction in educational skills. Typical users:

- College colleagues who wish to extend their professional repertoire
- Local public-school teachers whose ability to commute to extension courses is impeded
- Teacher-aide trainees
- Teaching interns
Introduction

This packet is a listing of current materials in a minor program of Skagit Valley College's Open Classroom. The program, addressed to both public-school and college teachers, offers professional training while working.

Only some of the materials listed herein can be adopted to the Greenbook System.

These materials are selected for small-group and independent study; many are programmed or accompanied by excellect student guides.

The sequence numbers used in this file, beginning with 0/1, are assigned as follows:

**FIRST DIGIT**

0: Introduction
1: Principles
2: Learning-theory
3: Planning, goals, objectives, and rationales
4: Testing
5: Selecting materials
6: Constructing and writing materials
7: Teaching techniques
8: Evaluation
9: Miscellaneous

**SECOND DIGIT**

The second digit is an item number; the third, if used, is a sheet number in case several sheets are used for a single item.

Additional materials may be located in the following Open Classroom files:

- Oleanna Math Program
- Snoragasbord
- Tiger Learning Skills Project File
- The Phile (Problem Solving)

Prices listed in this packet are effective as of the time the entries are provided and will not normally be updated.

I'd appreciate suggestions from users, especially: (i) qualitative critique, (ii) suggestions on use, (iii) errata, (iv) new materials.

Walter A. Coole
Open Classroom
Skagit Valley College
Mt. Vernon, WA 98273

144
<table>
<thead>
<tr>
<th>0/3</th>
<th>Publishers</th>
</tr>
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| Allyn & Bacon.  
470 Atlantic Ave.  
Boston, MA 02210 | American Association for Higher Education  
One Dupont Circle  
Washington, DC 20036 |
| Educational Technology Publications, Inc.  
140 Sylvan Ave.  
Englewood Cliffs, NJ 07632 | Educational Testing Service  
Princeton, NJ |
| Fearon Publishers  
6 Davis Drive  
Belmont, CA 94002 | Harcourt, Brace, & Jovanovich, Inc.  
757 Third Ave.  
New York, NY 10017 |
| Intext Educational Publishers  
257 Park Ave., South  
New York, NY 10010 | Little, Brown & Co.  
34 Beacon St.  
Boston, MA 02517 |

<table>
<thead>
<tr>
<th>0/4</th>
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| McGraw-Hill, Inc.  
Princeton Rd.  
Hightstown, NJ 08520 | |
| Prentice-Hall, Inc.  
Englewood Cliffs, NJ 07632 | |
| Research Press Co.  
P. O. Box 3327  
Country Fair Station  
Champaign, IL 61820 | Teachers College Press  
Columbia University  
1234 Amsterdam Ave.  
New York, NY 10027 |
| Scott, Foresman & Co.  
1900 East Lake Ave.  
Glenview, IL 60025 | University of Nebraska Press  
901 North 17th St.  
Lincoln, NE 68508 |
| University of Arizona Press  
P. O. Box 3398  
Tucson, AZ 85722 | William C. Brown Co.  
135 South Locust St.  
Dubuque, IA 52001 |
| Wadsworth Publishing Co.  
Belmont, CA 94002 | |
This 27 module system provides highly flexible instructional materials and evaluation instruments for a wide variety of users. A test module, in addition to the 26 topic modules, provides personalized competency assessment. The test module contains The Diagnostic Pretest for self-evaluation in the basic competencies developed in the self-instructional booklet module. A Personal Profile Sheet permits individuals to identify those areas for development, and later, to record improvement. A Comprehensive Mastery Test covers all areas in the system and thus provides an objective measure of personal goals developed and skills acquired by using the booklet modules.

Teachers may proceed through the booklet modules at their own rate, stopping at any point to re-read, or proceeding as quickly as they like. At the close of each booklet is a short mastery test (plus a correct answer key) serving as a self-test for the teacher on the skill or knowledge acquired by studying the booklet. By using this competency check, the teacher can personally determine whether the concepts have been understood...From the publisher's advertising.

This collection is an excellent course of basic work.

2/1 TITLE: Educational Psychology and Its Classroom Applications
Time: 165 hr. Author: M. Daniel Smith Price: $ 10
Publisher: Allyn & Bacon
Student manual: Student Guide Price: $
Teacher's material: (i) Information & Suggestions for the Instructor (ii) Test Manual

2/1 and 2/2 are an excellent sequence for thorough mastery of learning-theory.
TITLE: Teachers for Tomorrow
Time: 
Author: O'Banion, Terry 
Publisher: University of Arizona Press
Student Manual: 
Teacher's Material: 
Price: $2.75

TITLE: Emerging Educational Issues
Time: 
Author: Menacker, Julius & Pollack, Erwin
Publisher: Little, Brown & Co.
Student Manual: 
Teacher's Material: 
Price: $6
+ 1/3  TITLE: Career Development of the Effective College Teacher
Time:   Author: Eble, Kenneth
Publisher: AAUP
Student manual: 
Teacher's material: 
Price: $1.00

+ 1/4  TITLE: Effective College Teaching
Time:   Author: William H. Norris
Publisher: American Assn for Higher Education
Student manual: 
Teacher's material: 
Price: $3.50

149
<table>
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<tr>
<th>Title: A Behavioral Approach to Teaching</th>
<th>Price: $7</th>
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<tr>
<td>Author: Baird, Belt, Holder, &amp; Webb</td>
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<tr>
<td>Publisher: Wm. C. Brown Co.</td>
<td></td>
</tr>
<tr>
<td>Student manual:</td>
<td>Price: $</td>
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<tr>
<th>Title: Signs of Good Teaching</th>
<th>Price: $</th>
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<tr>
<td>Author: William S. Vincent</td>
<td></td>
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<tr>
<td>Publisher: Institute of Administrative Research</td>
<td></td>
</tr>
<tr>
<td>Student manual: 33 Roles for Teachers &amp; Pupils in the Classroom</td>
<td>Price: $</td>
</tr>
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<td>Teacher's material:</td>
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For updates: Greenbook Abstract & Catalog.
2/2

TITLE: The Psychology of Learning & Instruction
Time: 165 hr. Author: John P. DeCecco
Publisher: Prentice-Hall
Student manual: Student Guide
Teacher's material: Teacher's Manual
Price: $11

2/3

TITLE: Human Development & Learning
Time: 165 Author: Hugh V. Perkins
Publisher: Wadsworth
Student manual: Price: $13
Teacher's material: Price: $
Identity & Teacher Learning

**Title:** Identity & Teacher Learning

**Time:** 15 hr.

**Author:** Robert C. Burkhart & Hugh M. Neil

**Publisher:** International Textbook Co.

**Student manual:**

**Teacher’s material:**

---

Learning

**Title:** Learning

**Time:** 15 hr.

**Author:** J. Charles Jones

**Publisher:** Harcourt, Brace Jovanovich

**Student manual:**

**Teacher’s material:**

Good review of content of 2/1 and 2/3.
3/1  TITLE: Preparing Instructional Objectives
Time: 5 hr. Author: Mager, Robert
Publisher: Fearon
Student manual:
Teacher's material:

3/2  TITLE: Developing Vocational Instruction
Time: 5 hr. Author: Mager, Robt. & Beach, Kenneth M.
Publisher: Fearon
Student manual:
Teacher's material:
TITLE: Goal Analysis
Time: 5 hr. Author: Mager, Robert
Publisher: Fearon
Student manual:
Teacher's material:

Price: $2

TITLE: Analyzing Performance Problems
Time: 5 hr. Author: Mager, Robt & Pipe, Peter
Publisher: Fearon
Student manual:
Teacher's material:

Price: $3
3/5  TITLE: How To Write & Use Performance Objectives
       To Individualize Instruction
       Time: 8 hr  Author: Boston, Robt. E.
       Price: $12
       Publisher: Educational Technology Publications
       Student manual:
       Price: $
       Teacher's material:
       Four Volumes

3/6  TITLE: New Approaches to Behavioral Objectives
       Time: 3 hr  Author: Burns, Richard W.
       Price: $3
       Publisher: Wm. C. Brown Co.
       Student manual:
       Price: $
       Teacher's material:

Tiger
Teaching Skills
TITLE: Objectives for Instructional Evaluation
Time: 6 hr.  Author:  Price: $5
Publisher: Allyn & Bacon
Student manual:
Teacher's material:

TITLE: Interpreting Text Scores
Time: 10 hr.  Author: David Monroe Miller  Price: $3
Publisher: Wiley
Student manual:
Teacher's material:
4/2  TITLE:  Multiple-Choice Questions: A Close Look
Time: 2 hr.  Author:  
Publisher: Educational Testing Service 
Student manual: 
Teacher's material: 

6/1  TITLE:  Developing Individualized Instructional Material
Time: 21 hr  Author:  Stuart R. & Rita Johnson  
Publisher: Westinghouse Learning Press 
Student manual:  
Teacher's material:  Institutional Support Manual
6/2
TITLE: An Audio Visual Primer
Time: 2 hr  Author: Michael Goudket
Publisher: Teachers College Press
Student manual:  
Teacher's material:  

6/3
TITLE: AV Instructional Materials Manual
Time: 50 hr. Author: Brown, James & Lewis, Richard  
Publisher: McGraw-Hill
Student manual:  
Teacher's material:  

TECHNOLOGY

TEaching SKILLS

TECHNOLOGY

TEaching SKILLS

"X 8" format, cut along dotted lines. For updates: Greenbook Abstract & Catalog.
9/1  TITLE: Philosophy in the Classroom: A Report
Author: John Henry Melzer  Price: $
Publisher: University of Nebraska Press
Student manual:  Price: $
Teacher's material:

9/2  TITLE: How To Use Contingency Contracting in the Classroom
Author: Lloyd Homme  Price: $
Publisher: Research Press Co.
Student manual:  Price: $
Teacher's material:
This new section of the *Greenbook Abstract & Catalog* documents a previously undocumented Open Classroom effort, providing an unstructured, ad hoc source of self-instruction in management skills.
OPEN CLASSROOM STUDIES IN MANAGEMENT

0/1

INTRODUCTION

This packet is a listing of current materials used in a minor program of Skagit Valley College's Open Classroom: independent studies in management. The program, addressed to mature students who are already employed in management--private, public, and educational.

The materials listed are textbooks designed or adapted for independent or student-directed group study. Much of it is usable as part of Greenbook System training of educational administrators; however, other items in this listing are appropriate only for commercial and industrial management.

The sequence numbers used to give order to this file are assigned thus:

0: Introduction
1: General principles
2: Planning
3: Budgeting & resource-allocation
4: Supervision
5: Review, evaluation
6: Miscellaneous

The second digit provides an item-sequence; the third digit, if used, indicates that several sheets are used for an item and indicates the sheet number.

0/2

OPEN CLASSROOM STUDIES IN MANAGEMENT

Additional materials are listed in:

- Olsanna Math Program Smorgasbord
- Tiger Learning Skills Project File
- The Philp (problem-solving)

Prices listed in this packet are effective as of the time the packet (and subsequent updates) is published and will not be routinely updated. Caveat emptor.

I'd appreciate suggestions from users, especially with regard to: qualitative criticism, methods of use, errata, new materials.

Walter A. Coole
The Open Classroom
Skagit Valley College
Mt. Vernon, WA 98273

For 5" X 8" format, cut along dotted lines. For updates: Greenbook Abstract & Catalog.
The publishers listed may be addressed as follows:

BROWN - William Q. Brown, Publishers
135 South Locust Street
Dubuque, IA 52001

FEARON - Fearon Publishers, Inc.
6 Davis Drive
Belmont, CA 94002

INT - International Textbook Publishers
257 Park Avenue, S.
New York, NY 10010

Princeton Road
Hightstown, NJ 08520

P-H - Prentice-Hall, Inc.
Englewood Cliffs, NJ 07632

5101 Madison Road
Cincinnati, OH 45227

WILEY - John Wiley & Sons, Inc.
605 Third Avenue
New York, NY 10016
TITLE: Principles of Management

Time: 100 hr  Author: Kazmier, Leonard J.  Price: $4
Publisher: McGraw-Hill

Student manual:

Teacher's material: Instructor's Manual

TITLE: Principles of Management

Time: 185  Author: Sisk, Henry L.  Price: $11
Publisher: S-W

Student manual:

Teacher's material:
1/3  TITLE: The Human Organization

OPEN

CLASSROOM

STUDIES

IN

MANAGEMENT

Time: 66 hours
Author: Likert, Rensis
Publisher: McGraw-Hill

Student manual:

Teacher's material:

Price: $10.50

4/1  TITLE: Behavioral Insight for Supervision

OPEN

CLASSROOM

STUDIES

IN

MANAGEMENT

Time: 80 hr.
Author: Reber, Ralph W. & Terry, Gloria E.
Publisher: P-H

Student manual:

Teacher's material:

Price: $6.50

Price: $
+ 4/2 TITLE: Analyzing Performance Problems
OPEN CLASSROOM STUDIES IN MANAGEMENT
Time: 10 hr. Author: Mager, Robert F. & Pipe, Peter Price: $3
Publisher: Fearon
Student manual:
Teacher's material:

+ 4/3 TITLE: School Administration: A Casebook
OPEN CLASSROOM STUDIES IN MANAGEMENT
Time: 100 hr. Author: Webb, Holmes & Doris J. Price: $3
Publisher: INT
Student manual:
Teacher's material:

For 5" X 8" format, cut along dotted lines. For updates: Greenbook Abstract & Catalog.
Elementary School Administration: A Casebook

Time: 60 hr. Author: Ranniger, Bill J., et al. Price: $3.50

The Secondary School Principal

Time: 120 hr. Author: Kraft, Lenord E. Price: $7

For 5" x 8" format, cut along dotted lines. For updates: Greenbook Abstract & Catalog.
6/1

**TITLE:** Writing: A Practical Guide for Business and Industry

**Time:** 36 hrs. **Author:** Ryan, Charles W.

**Publisher:** Wiley

Student manual: Price: $5

Teacher's material:

---

6/2

**TITLE:** Letters That Mean Business

**Time:** 15 hr. **Author:** Gilbert, Marilyn B.

**Publisher:** Wiley

Student manual: Price: $4

Teacher's material: Price: $8

For 5" x 8" format, cut along dotted lines. For updates: Greenbook Abstract & Catalog.
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<th>Title: The Art of Management</th>
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<tr>
<td>Time: 198 hours</td>
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<tr>
<td>Author: James L. Sisk &amp; James Kalbeen</td>
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<tr>
<td>Publisher: McGraw-Hill</td>
</tr>
<tr>
<td>Student manual: Student Involvement Guide</td>
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<td>Teacher's material:</td>
</tr>
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<th>Title: The Time Trap</th>
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<tr>
<td>Time: 10 hr.</td>
</tr>
<tr>
<td>Author: R. Alec MacKenzie</td>
</tr>
<tr>
<td>Publisher: McGraw-Hill</td>
</tr>
<tr>
<td>Student manual:</td>
</tr>
<tr>
<td>Teacher's material:</td>
</tr>
<tr>
<td>Price: $3</td>
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</table>
OPEN CLASSROOM STUDIES IN MANAGEMENT

+ 1/6

TITLE: Managing By Objectives
Time: 100 hr  Author: Paul Mali
Publisher: John Wiley & Sons, Inc.
Student manual: Managing by Objectives
Teacher's material: 

Price: $10

UNIVERSITY OF CALIF.
LOS ANGELES
JUL 1.6 1976
C Le aRINGHOUSE FOR JUNIOR COLLEGES

170 8.10