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ABSTRACT

This is the third in a series of reports which the PLATO Services Organization is publishing to keep users up to date on curricular developments on the PLATO system. Materials are listed here under 71 general subject matter areas. The report presents first a list of all subject areas and instructional levels in which PLATO lesson development is in progress. Then all materials available for student use are presented by subject area together with the number of instructional hours and the name of a person to contact for information or user data. (CH)

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CERL Report X-41

December, 1975

No. 3

PLATO CURRICULAR MATERIALS

ELISABETH R. LYMAN

ED124142

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

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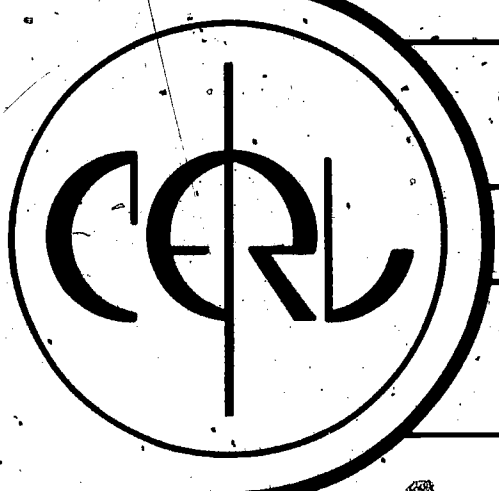

Computer-based Education Research Laboratory

University of Illinois Urbana Illinois

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Computer-based Education Research
Lab. Illinois University

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TABLE OF CONTENTS

PLATO CURRICULAR MATERIALS

SECTION I

Introduction

The development of curricular material for the University of Illinois PLATO IV system has continued at a rapid pace as the network has expanded during 1975. The number of terminals on the network is now near capacity having reaching around 950 located at 146 sites, one in Stockholm, Sweden, and the rest in the United States. Twenty-six of the sites are on the University of Illinois campus in Urbana. There are also two other PLATO systems, one in Tallahassee, Florida, and one in Minneapolis, Minnesota. PLATO curricular material now includes over 4000 well-tested lessons representing about 3500 hours of instructional material in seventy-one subject areas. Several hundred more hours are in preparation or are being tested including work in twenty-five additional subject areas.

This report is the third in a series of reports which the PLATO Services Organization at the Computer-based Education Research Laboratory at the University of Illinois publishes to keep PLATO users and prospective users up-to-date on curricular developments on the University of Illinois system. The report supercedes CERL Report X-41, No. 2 published in July 1974. The X-41 Reports provide information on lessons which have been completed, have been adequately checked, and have been used by students.

This report, the third edition of X-41, contains only the "summary" section (printed on green paper) of information on the curricular material. The report presents a list of (a) all the subject areas and instructional levels in which lesson development on PLATO is in progress and (b) the completed topics by subject area together with the number of instructional hours available in each topic whenever possible, and the names of a person to contact for information on each group of materials.

The third edition omits the detailed information about the use of the completed lessons as well as the section on PLATO games, which appeared in X-41, no. 2. It was hoped that by this time an on-line catalog of "finished" or "publishable" lessons would be available. Such a catalog will contain the "use" data and will allow access to each lesson. In anticipation of the new

"catalog" program, the "use" data has not yet been assembled. Users wishing "use" data on specific lessons should contact the person named as the contact for that subject area.

SECTION II

A. Subject Areas

Lesson development is in progress in the following curricular areas: (numbers indicate teaching levels; * indicate areas having tested completed materials)**

*Accountancy 3,4
Administrative Groups and Procedures 6
Agriculture
Agricultural Economics 4
Agricultural Engineering 4
* Agronomy 4
Animal Science 4
* Dairy Science 4
Architecture 4,5
*Broadcast Media 4
*Business Administration 4,5
*Cinema Studies 4
*Classics 4
*Communications 4
Computer Graphics 2,4
*Computer Science 4
Counseling 4
Design Science 4
*Driver Certification 6
Education
Art Education 2,4
Computer-Assisted Instruction 4
* Computer-Managed Instruction 4
* Education--general 3,4
Educational Administration 4
Educational Psychology 4,5
Engineering
* Aeronautical and Astronautical 4
Bioengineering 4
Chemical 4
* Electrical/Information 4
* Graphics 3,4
Industrial 4
Materials 4
Mechanical 4
Nuclear 4
Theoretical and Applied Mechanics 4
*English 2,4
Foreign Languages
Akkadian 2,4
Arabic 2,4
* Chinese 4
* Danish 2,4
* English as a Second Language 2,4
* French 2,4
Esperanto 2,4
* German 2,4
* Hebrew (Modern) 2,4
Hindi 2,4
* Italian 2,4
Japanese 2,4
Korean 2,4
* Latin 2,4
Norwegian 2,4
Persian 2,4
* Russian 2,4
Sanskrit 2,4
Serbian 2,4
* Spanish 2,4
Swahili 2,4
Swedish 2,4
Thai 2,4
Yoruban, 2,4
Industrial and Labor Relations 4
Information Science 4
International Relations 2,4
*Journalism 4
*Law 5
*Library Science 5
*Linguistics 4
*Literature 4
*Mathematics 1,2,3,4
Medical and Health Sciences
* Dentistry 5
* Medicine 5
* Nursing 3,5
* Pathology 5
* Pharmacy and Pharmacal Science 5
* Radiology 5
* Veterinary Medicine 4,5
Military Science 4
*Music 1,2,4

****

** 1 - Elementary 2 - Secondary 3 - Vocational 4 - College
5 - Professional 6 - General

Natural Sciences
* Biochemistry 4,5
* Biology 2,4
* Biophysics 4,5
* Botany 4
* Environmental Studies 2,4
  Forestry 4
* Genetics 4,5
* Microbiology 4,5
* Physiology 4,5
*Nutrition 4
Optometry 5
*Photography 2,3,4
*Physical Education 2,4
Physical Sciences
* Acoustics 4
* Astronomy 2,4
* Chemistry 4,5
* Electron Microscopy 4
* Geology 2,4
  Meteorology 4
* Physics 4,5
*Population Dynamics 2,4,5
*Reading 1
Recreation and Park Administration 4
Rocketry 2
Social Sciences
  Anthropology 4
* Economics 4
* Finance 4
* Geography 2,4
  History 4
  Philosophy 4
* Political Science 2,4
* Psychology 4,5
* Social Welfare 4
* Sociology 4
*Speech and Hearing Sciences 3,4
*Statistics 3,4,5
Telegraphy 2,3
Theater 4
Traffic and Transportation 2,3,4
*Urban Studies 4
Video and Film 4
Vocational Training
  Business Education 2,3,4
* Business Skills 2,3,4
* Electronic Training 3,4
* Food Service Training 3
* Leadership Training 3,4
* Machinist Training 3,4
  Micro Precision 3,4
* Pilot Training 3,4
* Retail Training 3,4
* Vehicular Training 3,4

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** 1 - Elementary 2 - Secondary 3 - Vocational 4 - College
5 - Professional 6 - General

SECTION II

B. Summary of Materials Available for Student Use

ACCOUNTANCY

Financial Accounting Principles
- Accrual Concepts (40 min)
- Changes in the Balance Sheet Equation (55 min)
- *Journal Entries I (75 or 50 min)
- *Journal Entries II (50 or 75 min)
- *Classification and Normal Balances (30 min)
- Income Statement (45 min)
- Closing Entries (50 min)
- General Journal, Ledger (variable)
- Adjusting Entries I (75 or 65 min)
- Adjusting Entries II (65 or 75 min)
- Worksheets (50 min)
- Inventory (Perpetual and Inventory Errors) (40 min)
- Accounts Receivable (55 min)
- Terms of Sale (40 min)
- Special Journals (20 min)
- Inventory Methods (35 min)
- Temporary Investments (90 min)
- Bank Reconciliations (50 min)
- Notes and Interest (70 min)
- Fixed Assets I: Acquisition and Depreciation (70 min)
- Fixed Assets II: Depletion, Amortization and Disposal (45 min)
- Compound Interest (70 min)
- *Long-term Investments in Bonds (Effective Rate Amortization) (55 min)
- Entries for Stockholders' Equity (75 min)
- *Long-term Liabilities (Effective Rate Amortization) (90 min)
- Investments (Cost vs Equity) (45 min)
- Funds Flow (45 min)
- Fund Statements (70 min)

Managerial Accounting Principles (30 hrs)
- Introduction to Cost Accounting (35 min)
- Cost Classification II
- Process Costing
- Job-Order Costing
- Non-Manufacturing Costs
- Breakeven Analysis
- Incremental Analysis

*Alternative versions of these lessons:
- Journal Entries for Service Firms
- Classification
- Long-Term Liabilities -- Bonds
- Long-Term Liabilities (Straight-Line Amortization)

ACCOUNTANCY -continued-

Managerial Accounting Principles -continued-
- Compound Interest
- Capital Budgeting
- Planning and Control
- Operational Budgeting
- Cash Budgeting
- Standard Costing I and II

(Contact: J. C. McKeown, 285 Commerce West, UIUC, Urbana, Illinois 61801, 217/333-4538 {mckeown of com})

AERONAUTICAL and ASTRONAUTICAL ENGINEERING

Aircraft Design (12 hrs)

(Contact: H. S. Stillwell, 101 Transportation Building, UIUC, Urbana, Illinois 61801, 217/333-2650 {glass of aero})

General
- Aerospace Engineering Games (.25+ hrs)

Solid Mechanics
- Elementary Beam Theory
  - Design (3 hrs)
  - Displacements (1 hr)
  - Internal Forces (3 hrs)
  - Section Properties (1.5 hrs)
  - Sheer Stress (2 hrs)
  - Theory (2 hrs)
- Elementary Torsion Theory
  - Design (1 hr)
  - Displacements (.5 hrs)
  - Internal Forces (3.5 hrs)
  - Section Properties (1.5 hrs)

(Contact: James A. Bennett, General Motors Corp., Research Laboratories, Warren, Michigan 48093 (work done at UIUC) {glass of aero})

AGRONOMY

Soil Physics
- Soil Water (open-ended, 2 to 15 hrs)

(Contact: Charles Boast, S-216 Turner Hall, UIUC, Urbana, Illinois 61801, 217/333-4370 {boast of cerl})

ASTRONOMY

Kepler's Laws of Planetary Motion (open-ended, 2-3 hrs)
Moon Phases and Almanac (open-ended, 2-3 hrs)
Stellar Constellations (open-ended, 2-3 hrs)

(Contact: Elaine Avner, 364 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500 {e avner of pso})

BIOCHEMISTRY

Basics of pH and Acid/Base
- Introduction and the Henderson-Hasselbach Equation
- Acid-Base Character of Amino Acids, Peptides, Proteins
- Buffer Problems
- Basic Science Applications in Clinical Medicine

Enzyme Kinetics
- Quantitative Description and the Michaelis-Menton Relationships
- Interactive Graphics
- Allosteric Control

Carbohydrates
- Introduction to Monosaccharides
- Structure of Monosaccharides
- Carbohydrate Identification and Structure
- Carbohydrate Identification -- Competitive Inter-action
- Carbohydrate Metabolism: Glycolysis

Amino Acids
- Structures, Names and Abbreviations
- Structures and Biochemical Characteristics
- Peptide Sequence Analysis

(Contact: Dr. Allen Levy, School of Basic Medical Sciences, UIUC, Urbana, Illinois 61801, 217/333-2507 {levy of mcl})

Protein Synthesis

(Contact: Prof. E. Kuemmerle, Chemistry Department, Illinois State University, Normal, Illinois 61761, 309/438-2359)

BIOLOGY

Experimental Tools and Techniques (see also BOTANY; MICROBIOLOGY)
- Tools Used in Biology -- Log Scales, Metric System, Chi-Square Analysis (60 min)

Chemical Basis of Life
- Matter and Atoms (50 min) {richcrocket of kka}
- Bonding and Organic Chemistry (35 min) {roncrockett of kka}
- Periodic Table of the Elements (30 min {arsenty of lsci}
- Scaler Experiment and Carbon-14 Dating Experiment (45 min) {arsenty of lsci}

Cellular Structure and Function (see also BOTANY, MICROBIOLOGY)
- Ultrastructural Concept (45 min)
- Cells Structure and Function (45 min)
- Diffusion and Osmosis (35 min)
- Surface Area/Volume in Living Systems (15-25 min)

Reproduction and Development (see also BOTANY)
- Mitosis (35 min)
- Mitotic Cell Division (30-40 min)
- Meiosis (45 min)
- Embryology (45 min)

Molecular Genetics
- DNA and Protein Synthesis (40 min)
- DNA, RNA, and Protein Synthesis (15-30 min)

Bioenergetics: Enzymes and Metabolism (see also BOTANY)
- Enzyme Experiments (30 min)
- Essentials of Photosynthesis (15-20 min)
- ATP, Anaerobic and Aerobic Respiration (30 min)
- Electron Transport Chain (15-20 min)
- Measuring the Level of Life (30 min)

Classical Genetics (see GENETICS)

Evolution (see also BOTANY, GENETICS)
- Natural Selection (50 min)
- Natural Selection Experiment (30-40 min)
- Comparative Serology (30-45 min)
- Genetic Drift (30-40 min) {hyatt of uiccbio}

Population Biology and Ecology (see also BOTANY, MICROBIOLOGY)
- Biogeochemical Cycles (20-30 min)
- Energy Relationships in Biological Systems (60-75 min)
- Predator-Prey Relationships (60 min)
- Buffalo -- Animal Population Experiment (25-45 min)
- Population Dynamics (15-30 min)

BIOLOGY -continued-

Plant Anatomy and Morphology (see BOTANY)

Plant Pathology (see BOTANY)

Plant Growth and Development (see BOTANY)

Taxonomy (see also BOTANY)
Use of Taxonomic Keys (20 min)

Human Anatomy and Physiology
ADH and Water Balance in Human (30-40 min)
Neuron Structure and Function (30-45 min)
Hormonal Control of the Menstrual Cycle (60 min)
Human Digestive System (50 min)
The Heart -- Structure and Function (40 min)
Cardiac Cycle (50 min)
Heart Rate Regulatory Mechanisms (45 min)
The Mechanics of Breathing (50 min)
Elementary Psycho-Physiology of Audition (90-120 min)
Movement (Muscles) (60 min) {denault of biocc}

Animal Behavior
Physiological Basis of Learning (30 min)
Simple Animal Behavior -- Klinokinesis (30-45 min)
Social Behavior of Birds (30-45 min)
Classical Imprinting in Fowl (35-45 min) {hyatt of uiccbio}

(General Contact: Kathie Herrick or Steve Boggs, 203b Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7450 {herrick or boggs of biocc})

BIOPHYSICS

Bioelectric Phenomena in Excitable Cells (3-6 hrs)
Electricity in Physiology
Neuron Excitability Experiment
Electrodiffusion

(Contact: Lloyd Barr, 446 Burrill Hall, UIUC, Urbana, Illinois 61801, 217/333-7423 {mckown of physio})

Modelling (open-ended)
Hodgkin-Huxley Model of a Nerve Cell Membrane (2 hrs)
Generalized Biophysical Modelling Program

(Contact: David Walter or Russ McKown, 42 Burrill Hall, UIUC, Urbana, Illinois 61801, 217/333-4872 {mckown of physio})

BOTANY

Tools and Techniques
- A Tool: The Spectrophotometer (25 min)
- Experimental Technique (45 min)
- Life in a Microcosm (20+ min)

Taxonomy
- Plant Taxonomy (45 min)
- Tree Identification (15 min)

Anatomy and Morphology
- Organization of the Higher Plant (45 min)

Populations
- Populations Laboratory Using E. Coli (15-25 min)

Genetics (see GENETICS)

Evolution
- Induced Mutations Experiment Using Aspergillus (20-40 min)
- Plant Life Cycles (90 min)

Growth and Development
- Seed Germination (30-40 min)
- Plant Growth (20-30 min)
- Plant Responses and Apical Dominance (30-40 min)
- Flowering and Photoperiod (30-45 min)
- Fruiting and Leaf Senescence (15-20 min)
- Enzyme-Hormone Interactions (20-40 min)

Plant Pathology
- Plant Pathology (40 min)

Bioenergetics
- Photosynthesis (40 min)
- Experiments in Photosynthesis (20 min)
- Respiration and Enzymes (45 min)
- Experiments in Respiration (30 min)

Cell Function
- Introduction to Water Relations (15 min)
- Water Relations Laboratory (30 min)

(Contact: Alan Haney, 401 Natural History Building, UIUC, Urbana, Illinois 61801, 217/333-4396 {haney of bot100})

BUSINESS ADMINISTRATION

Management Science (12.5 hrs)
- Inventory Theory
- Introductory Game Theory
- Linear Decision Models
- Rational Decision Making

(Contact: Richard V. Evans, 383 Commerce West, UIUC, Urbana, Illinois 61801, 217/333-6511)

BUSINESS SKILLS

Business Skills Training Course (Lowry Air Force Base)
- Inventory Management for Supply Specialists (2 hrs)

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

Typing
- Beginning typing (1 hr)

(Contact: A. Appel, 206 Pell Circle, Urbana, Illinois 61801, 217/344-4131 {appel of uni})

CHEMISTRY

Analytical Chemistry
- Calculation of K_{sp} from Potentiometric Data (60-90 min)
- Effects of pK_a (acid) and (base) on Shape of Titration Curves (60 min)
- Introduction to Beer's Law
- Ion Selective Electrodes
- Basic Gas Chromatography

(Contact: Ed Nagel, Neils Science Center, Valparaiso University, Valparaiso, Indiana, 46383, 219/462-5111 {nagel of vuc})

Mass Spectroscopy
Atomic Orbitals

(Contact: Harrison Shull, Chemistry Department, Indiana University, Bloomington, Indiana 47401, 812/337-8913 {shull of iu})

General Chemistry
- The Gas Laws (40 min)

(Contact: Milada Benca, Kennedy King College, 6800 S: Wentworth, Chicago, Illinois 60622, 321/962-3421 {benca of kka})

CHEMISTRY -continued-

General Chemistry -continued-
- Behavior of Gases (30 min)
- Review of Mathematicl Skills
- Use of the Slide Rule
- Kinetics
- Practice Balancing Simple Chemical Equations
- Inorganic Qualitative Analysis Simulation
- Percent Composition Problems
- Ionic Nomenclature
- Nomenclature of Covalent Compounds
- Nuclear Chemistry
- Identification of Some Inorganic Ions

(Contact: Robert Grandey, Parkland College, 2400 W. Bradley, Champaign. Illinois 61820, 217/351-2200 {grandey of park})

- The Metric System (30 min)
- Scientific Notation (30 min)
- Inorganic Nomenclature (40 min)
  - The Elements
  - Number of Valence Electrons
  - Common Ions
  - Familiar Acids, Bases and Salts
- Atomic Theory -- Historical Introduction (35 min)
- Molecular Formulas and Per Cent Composition (45 min)
- Solutions: Concentration (50 min)
- Introduction to Titrations (2 versions, one using microfiche) (45 min each)
- Acid-Base Titration Experiment (25 min)
- Acids and Bases (25 min)
- pH and Acid-Base Titration Curves (40 min)
- Problems on Concentration and Stoichiometry (30 min)
- Freezing Point Depression Experiment (50 min)
- Lewis Structures and Bonding (65 min)
- Kinetics (Illinois State University)
- Heats of Chemical Reactions: Hess's Law (50 min)
- Introduction to Chemical Equilibrium (30 min)
- Naming the Elements (interterminal game)
- Using the Analytical Balance (Mettler no. 15)
- Introduction to the PLATO Keyboard (15 min)

Organic Chemistry
- Organic Nomenclature, I and II (60 min)
- Bonding in Carbon Compounds (30 min)
- Optical Activity (40 min)
- Lewis Structures and Bonding (40 min)
- Alkene Chemistry (30 min)
- Substitution and Elimination Reactions (30 min)
- Alcohol Chemistry (60 min)
- Additions to Carbonyl Groups (60 min)

CHEMISTRY -continued-

Organic Chemistry -continued-
- Reactions of Aldehydes and Ketones (45 min)
- Arene Chemistry (50 min)
- Aromatic Synthesis (40 min)
- Introduction to Nuclear Magnetic Resonance (30 min)
- NMR Spin-Spin Coupling (30 min)
- Interpretation of NMR Spectra (40 min)
- Infrared Spectroscopy (45 min)
- Reactions Used in Qualitative Analysis
- Qualitative Organic Analysis (90 min)
- Purification by Crystallization (.5 hrs)
- Aliphatic Synthesis (1 hr)
- Carbohydrates (.5 hrs)

(Contact: Stanley Smith, 254 Roger Adams Laboratory, Box 46, UIUC, Urbana, Illinois 61801, 217/333-3839 {stan smith of chem})

CHINESE

Elementary Chinese (15 hrs)

(Contact: Chin-Chuan Cheng, 4101 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1206 {cheng of mflu})

CINEMA STUDIES

Experimenting with Film Studies (4 hrs)
- Bibliographies on Films and Directors
- Cinema Chronology
- Cinema Hardware
- Cinema Quiz
- Multiple Choice Questions with Mini-Essay Answers
- Selected Student Papers

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl1})

COMMUNICATIONS

Radio -- TV Management
- Broadcast Management Simulation (4.5 hrs)

(Contact: Timothy Fay, 119 Gregory Hall, UIUC, Urbana, Illinois 61801, 217/333-0850 or 333-1070 {fay of rtv362})

COMPUTER MANAGED INSTRUCTION

(The following lessons are not available for public use at this time, but the "contact" is glad to talk to anyone about them.).

Management of Study and Learning for Course in Elementary Economics (10 hrs)
Management of Study and Learning for Course in American History (5 hrs)

(Contact: Thomas Anderson, 226 Education, UIUC, Urbana, Illinois 61801, 217/333-2604 {alessi of edpsych})

COMPUTER SCIENCE

General and Miscellaneous Programs
- Master Index to the Computer Science Lessons
- Introduction to Computers and Computer Programming
- Introduction to Algorithms
- Turing Machines
- Simulation of Epic 2000 Calculator
- Maze Traversing Algorithm
- Manual for Grafix
- PLATO Hardware and Software

Mini-Languages
- Child's Drawing
- Drawing Language
- Recursion
- Introduction to Robot
- Robot Mini-Language
- Stacks Mini-Language
- Backtrack Algorithm

Language Independent Programming
- Flow Charting
- DO-Type Loops
- Begin Blocks
- Decision Tables
- File Processing
- Recursion
- Structured Programs
- Formal Computer Languages

PL/I Language (25 hrs)
- Introduction
- Data Types
- Operations
- Arithmetic
- String Operations
- IF-THEN, DO Groups
- DO Loops
- Arrays

COMPUTER SCIENCE -continued-

PL/I Language -continued-
- Advanced Array Examples
- Procedures
- LIST Input/Output
- EDIT Input/Output
- Drill on EDIT I/O
- Recursive Programming
- Data Structures
- Exam

FORTRAN Language (10-20 hrs)
- Introduction
- Arithmetic
- IF Statements
- DO Statements
- Subprograms
- Subprogram Examples
- Introduction to Arrays
- Advanced Arrays
- FORMAT Statements
- Character Handling
- Format Simulator
- Exam

BASIC Language
- Introduction
- Beginning BASIC
- Advanced BASIC
- Arrays in BASIC
- Exam

COBOL Language
- Introduction to the COBOL Lesson Sequence
- COBOL Identification and Environment Divisions
- Advanced COBOL PICTURE Clauses
- COBOL Data Division
- COBOL Procedure Division

APL Language
- Introduction to the APL Language
- Scalars
- Vectors

Machine and Assembler Languages and Computer Simulators
- A Simple Computer
- Machine Language
- PDP8/L Simulator

COMPUTER SCIENCE -continued-

Other Languages
- SNOBOL4
- LISP
- Introduction to LOGO
- LOGO Test Instruction
- LOGO Procedures

Information Processing
- Sorting
- Sort Program Judging
- Binary Searching
- Introduction to the Data Structures Sequence
- Information Structures
- Information Structures Drills
- Experience with Stacks
- Experience with List Space
- Experience with List Nodes Drills

Numerical Analysis
- Introduction
- Matrix Multiplication
- Numerical Integration
- Linear Equations
- Nonlinear Equations
- Least Squares
- Linear Programming
- Monte Carlo
- Spline Approximations

Applications
- Discrete Simulation
- Simulation Games
- Traffic Simulation
- Payroll Program
- Business Applications

Logical Design
- Introduction
- Boolean Expressions
- Basic Building Blocks
- Complementary Building Blocks
- Combined Problems
- Data Flow Diagrams

Compilers
- Reference Manual
- PL/I Compiler
- FORTRAN Compiler
- BASIC Compiler
- COBOL Compiler
- APL Compiler
- SNOBOL4 and SPITBOL Compiler

COMPUTER SCIENCE -continued-

Lesson Writing and Evaluation
- User Feedback
- On-Line Consultation
- Author Introduction
- Lesson Writing
- KAIL Compiler
- KAIL Reference
- Common Code, etc.
- Author Communication
- Student Router
- Author Practice

(Contact: George Friedman, Jr., 128 Digital Comp. Lab., UIUC, Urbana, Illinois 61801, 217/333-7505 {friedman of csa})

Computing Services Office
- IBM OS/360/370 Job Control Language
- CalComp Plotter
- Remote Terminals

(Contact: George Friedman, Jr., 128 Digital Comp. Lab., UIUC, Urbana, Illinois 61801, 217/333-7505 {friedman of csa})

Data Structures

(Contact: Stuart C. Shapiro, Computer Science Department, 101 Lindley Hall, Indiana University, Bloomington, Indiana 47401, 812/337-1233 {warner of iu})

PLATO TUTOR Language Training Lessons (up to 40 hrs)
- Computer Background for New PLATO Authors (1 hr)
- TUTOR, an Interactive Reference for New Authors (1 hr)
- Tests on Basic TUTOR Commands (2 hrs)
- Author Mode and Student Mode Solutions to the Basic TUTOR Programming Problems (1 hr)
- States in TUTOR, the Order of Execution of TUTOR Commands (.5 hr)

(Contact: Larry D. Francis, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

DANISH

Syntax (2 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl})

DENTISTRY

Biostatistics
Dental Histology
Structure of the Tooth

(Contact: Robert Votaw, Bldg. A, Rm. M033, Health Center, University of Connecticut, Farmington, Connecticut 06032, 203/674-2037 {votaw of conn} or {campi c of conn})

Diagnosis and Treatment of Emergencies (self-evaluation and post-test) (1.5 hrs)
Medical Emergencies (2 hrs)
Prescription Writing (2 hrs)
Statistics for Dentistry (1.5 hrs)

(Contact: Steve Summers, J. Hillis Miller Health Center, Comicore Building, Rm. C-237, University of Florida, Gainesville, Florida, 32601, 904/392-4119)

DRIVER CERTIFICATION

Mastery Learning Material for Driver Training (5 hrs)

(Contact: Lisa Parker, 252 Engineering Research Lab., UIUC, Urbana, Illinois 61801, 217/333-6210 {parker of ed})

ECONOMICS

General Equilibrium Theory in an Exchange Economy (1.5 hrs)
Consumer Behavior
Multiple Market Equilibrium Simulation

(Contact: Robert Gillespie, 450 Commerce West, UIUC, Urbana, Illinois 61801, 217/333-4586)

Introductory Economics Concepts
Macroeconomics (2 hrs)
Microeconomics (1.5 hrs)

(Contact: Donald Paden, 225- David Kinley Hall, UIUC, Urbana, Illinois 61801, 217/333-2175 {j wilson of unidel})

See also: COMPUTER MANAGED INSTRUCTION

EDUCATION

Mathematics
Secondary and Continuing Education
Classroom Simulations Focusing upon Teaching and Questioning Strategies (5 hrs)
Modelling and Simulation Activities for High School Students (3 hrs)
Sample High School Mathematics Programs (5 hrs)

(Contact: Janice Flake, Mathematics Education Department, Florida State University, Tallahassee, Florida 32306, 904/644-1833 (lessons developed at UIUC))

Physical Education
Physical Education Curriculum Planning--A Simulation (2 hrs)

(Contact: Karen Fry, 201 Kinney Gymnasium, UIUC, Urbana, Illinois 61801, 217/333-2484 {fry of pecp})

Psychology
Effective Feedback Skills for Company Commanders (6 hrs)

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

Science
Teaching for Mastery in Science (2 hrs)

(Contact: James R. Okey, College of Education, University of Georgia, Athens, Georgia 30602, 404/542-1764)

Test Construction (Aberdeen Proving Ground)
Supervision of Practice Exercise
Characteristics of Testing
Machining Quizzes
MOS Testing
Purposes of Testing
Types of Tests
Test Administration
Test Analysis I and II
Test Analyzer and Math Drills
Test Item Analysis

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

ELECTRICAL/INFORMATION ENGINEERING

Computer-Guided Experimentation
- Description of Computer-Guided Experimentation Research
- Computer-Guided Expermentation Research Routines
- Computer-Guided Experimentation Lessons (4-12 hrs)
  - (completion time dependent on prior laboratory experience)
    - Introduction to Computer-Guided Experimentation (15 min)
    - The Oscilloscope (2 hrs)
    - The Audio Oscillator (1 hr)
    - The Function Generator (1 hr)
    - The DC Supply (.5 hr)
    - The Vacuum Tube Voltmeter (1 hr)
    - Transients (1.5 hr)
    - Impedance (1.5 hr)
    - Two-Port Networks (1.5 hr)

(Contact: James P. Neal, 361 Electrical Engineering Building, UIUC, Urbana, Illinois 61801, 217/333-4351 {neal of eecge})

Drill on DC Analysis Topics
- Conventional Current (5 min)
- Ohm's Law and the Resistor (26 min)
- Voltage and Current Sources (9 min)
- Series/Parallel Nets (22 min)
- Voltage Division (10 min)

Drill on AC Analysis Topics
- Sinusoidal Functions (10 min)
- Complex Number Arithmetic, (15 min. drill, calculator, plotter)

Network Simulators (open-ended, non-tutorial)
- DC and Steady-State AC
- Step-Function and Source-Free RL and RC
- Source-Free Parallel RC

(Contact: Paul Weston, 329d Electrical Engineering Building, UIUC, Urbana, Illinois 61801, 217/333-4694 {weston of ee})

- Concepts of Dielectrics in Media and Polarization
- Diffusion Profile Plotter
- Diode Design
- Divergence
- Electromagnetics: Smith Charts, Antennae Field Patterns, Array Patterns
- Integrated Circuits
- Manipulating Logical Expressions
- Physical Significance and Electrical Applications of the Curl
- Potential Maps
- Rectangular, Cyclindrical and Spherical Coordinate Systems

(Contact: David V. Meller, Room 357 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500 {dvm of ee})

ELECTRICAL/INFORMATION ENGINEERING -continued-

Basic Electronics
- Diode Electronics (.75 hr)
- Transistor Bias (1.5 hrs)
- Transistor Amplifiers (1.5-2 hrs)

(Contact: R. Arzbaecher, Information Engineering Department, UICC, Chicago, Illinois 60680, 312/996-2311 {droege of uicc})

ELECTRONIC TECHNOLOGY

Electronic Training (7 hrs) (Army Signal Center, Ft. Monmouth)
- Parallel Circuits
- Series Parallel Circuits
- Ohm's Law
- DC Power
- Series Circuits
- Trouble Shooting
- Introduction to First Aid and Safety in the Shop

Electronic Training (San Diego)
- Using the Simpson 601-1 Multimeter as an Ohmeter (4 hrs)
- Using the Simpson 601-1 Multimeter as an Ammeter (4 hrs)
- Oscilloscope Training (4 hrs)

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

ELECTRON MICROSCOPY

The Hitachi HU-11 Series Vacuum System (.3-1 hr)

(Contact: D. L. Davis, Center for Electron Microscopy, UIUC, Urbana, Illinois, 61801, 217/333-2108 {davis of uicem})

ENGINEERING GRAPHICS

- Multiview Projection (3 hrs)
- Crossword Puzzle on Drafting Terminology (1 hr)
- Engineering Terms (1 hr)
- Engineering Statics

(Contact: Ben Lathan, Malcolm X College, 1900 W. Van Buren, Chicago, Illinois 60622, 312/942-3295 {lathan of mxc})

- Scales and Engineering Measurements (20 min)
- Orthographic Projection: Points (15 min).

(Contact: Wayne C. Dowling, 305A Marston Hall, Iowa State University, Ames, Iowa 50011, 515/294-8365 {dowling of ames})

ENGLISH -continued-

Capitalization
- Common and Proper Nouns (30 min)
- Test in Basic Capitalization (30 min)
- Capitalization Rules for Names and Titles (15 min)

Composition
- Assembling a Paragraph (45 min)
- Editing Symbols, Verbs (30 min)

Editing
- Improving Editing Skills (60 min)
- Editing Misspellings (60 min)
- Paragraph Editing I (1 hr)
- Paragraph Editing II (1 hr)
- Diction and Punctuation Errors (80 min)
- Basic Errors in Punctuation and Word Usage (60 min)
- Commonly Misused Words (90 min)
- Proofreading and Spelling (20 min)

Grammar
- Short Review of Parts of Speech (40 min)
- Test on Grammar and Usage (30 min)
- Complete Sentences (15 min)
- Subject and Predicate Recognition (50 min)
- Simple Subject, Verb, and Simple Complement Recognition (45 min)
- Subject-Verb Agreement I and II (1.75 hrs)
- Pronoun-Verb Agreement (10 min)
- Pronouns (30 min)
- Pronouns: Possessive, Object, Subject (45 min)
- Introduction to Verbs (30 min)
- Verb Tenses (60 min)
- Recognition of Verb Tenses (60 min)
- Subjunctive (40 min)
- Passive Verbs (30 min)
- Irregular Verbs (5 separate lessons) (3 hrs)
- Copulative Verbs (10 min)
- Verbs and Verb Phrases Within a Sentence (45 min)
- Prepositional Phrases (40 min)
- Dangling Participles, Misplaced Modifiers (60 min)
- Infinitive (35 min)
- Run-on Sentences (10 min)
- Gerunds (60 min)
- Double Negatives (15 min)
- Direct and Indirect Objects (60 min)
- Who/whom (60 min)
- Noun Clauses (60 min)
- Adjective Clauses (50 min)
- Adverbial Clauses (25 min)
- Compound Sentences (35 min)

ENGLISH -continued-

Poetry
- Analysis of e e cummings' "portrait" (45 min)
- Inductive Approach to Poetry (20 min)
- Full, Part, and Symbolic Rhyme (60 min)

Punctuation
- Punctuation Diagnostic (40 min)
- Commas and Periods (30 min)
- Semicolons and Commas (30 min)
- Basic Rules of the Semicolon (45 min)
- Use of Semicolons with Adverbs (30 min)
- Placement and Punctuation of Adverbs (20 min)
- Quotation Marks (30 min)
- Quotations at Start of Sentences (15 min)
- Quotations at End of Sentences (30 min)

Research
- Bibliographic Form (60 min)
- Use of the Dictionary (40 min)
- Footnotes (60 min)

Spelling
- Diagnostic Spelling Test (40 min)
- Singular and Plural Nouns and Possessives (30 min)
- Spelling Drill (90 min)
- Commonly Misspelled Words (120 min)
- "c-related" Words (25 min)
- Dictionary Symbols: Consonants (30 min)
- Dictionary Symbols: Syllable Division, Accents, Vowel Symbols (35 min)

Usage
- Diagnostic Test in Usage and Sentence Structure (45 min)
- Misused Words (2 separate lessons) (90 min)
- Homonyms (35 min)

Vocabulary
- Vocabulary Building Using Latin and Greek Roots (32 lessons -- 60 min each) {scanlan of mfl}

Miscellaneous
- Analogies (90 min)
- Spelling Word Game
- Reading for Implied Meanings (25 min)

(General Contact: Pauline Jordan, Community College English Coordinator, 201D Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7450 {jordan of english})

Introductory Lessons For Chaucer Students (40 min)

(Contact: N. D. Hinton, Sangamon State University, Springfield, Illinois 62700, 217/786-6720 {hinton of ssu})

ENGLISH AS A SECOND LANGUAGE

Practice in Reading and Writing (designed for foreign students) (32 hrs)

(Contact: Roberta Stock, Language Laboratory, UIUC, Urbana, Illinois 61801, 217/333-1719 {roberta of mf1})

Syntax (10 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mf1})

ENVIRONMENTAL STUDIES

Animal Ecology
Animal Management
Diet Program
Ecosystem Model
Model Development Language
Simulated Disaster
Water Pollution

(Contact: Steven Petak, 166 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801 {petak of ed})

FINANCE

Fundamentals of Real Estate and Urban Economics (6 hrs)
Urban Growth
Urban Structure
Urban Problems
Legal Environment of Urban Space Use
Housing
Urban Redevelopment
Valuation and Investment Analysis
Large-Scale Real Estate Development

(Contact: Austin Jaffe, Box 4, David Kinley Hall, Department of Finance, UIUC, Urbana, Illinois 61801, 217/333-2110 {jaffe of cerl})

FOOD SERVICE TRAINING

Food Service Training Course (Maxwell Air Force Base) (1.5 hrs)
Cook's Worksheet
Recipe Conversion

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

FOREIGN LANGUAGES -- GENERAL

Polyglot Game (13 languages) (2-26 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl})

FRENCH

Beginning French (100 hrs)
- Dialogue
- Grammar

Culture and Civilization (6 hrs)
- Anthropology
- Geography of France
- Geology of France
- Stylistic Diversion
- Subway

Grammar and Syntax (12 hrs)

Linguistics (70 hrs)
- Phonemics
- Phonetics

Reading Comprehension/Translation (30 hrs)

Vocabulary (28 hrs)

(Contacts: M. Keith Myers or Fernand Marty, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl} or {marty of mfl})

GENETICS

Classical
- Vocabulary Drills for Genetics (2 hrs)
- Elementary Probability and Mendel's Laws (50 min)
- Blood Typing (40 min)
- Drosophila Genetics (50 min)
- Genetics and Heredity (20 min)
- Plant Genetics Problems (20 min)
- Gene Mapping in Diploid Organisms (60-90 min)

(Contact: Kathy Herrick or Steve Boggs, 203B Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7450 {herrick of biocc} or {boggs of biocc})

GENETICS -continued-

Chromosome Karyotyping I and II (1+ hrs)
Genetics Counseling (1+ hrs)
Genetics and Probability (1+ hrs)
Reading and Writing Pedigrees (1 hr)

(Contact: Dr. Allen Levy, 605 S. Goodwin, UIUC, Urbana, Illinois 61801, 217/333-2507 {levy of mcl})

Quantitative Genetics (1-2 hrs)
Population Genetics (2-3 hrs)
Inbreeding--Regular and Irregular Patterns (1-2 hrs)

(Contact: Michael Grossman, 215 Animal Science Laboratory, UIUC, Urbana, Illinois 61801, 217/333-2626 {grossman of lsci} or {walter of physio})

GEOGRAPHY

-Social/Cultural Geography
Room Geography (.25 hr)
Spatial Diffusion (1+ hrs)

(Contact: Ivan M. Pour, Department of Urban Planning, 904 W. Nevada, Urbana, Illinois 61801, 217/333-3891 {pour of urban})

Geography of France (1 hr)

(Contact: F. Marty, G70c Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-9776 {marty of mfl})

GEOLOGY

Geology of France (1 hr)

(Contact: F. Marty, G70c Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-9776 {marty of mfl})

Introduction to Radioactivity and Geologic Time (30 min)

(Contact: D. Oberpriller, c/o Prof. John Robson, PLATO Project, Room 311, University Computer Center, University of Arizona, Tucson, Arizona 85721 {oberpriller of arizona})

New Global Tectonics and Continental Drift

(Contact: Christopher Scotese, c/o PLATO Project, 221 S.E.S., UICC, Chicago, Illinois 60640, 312/996-5157 {scotese of uicc})

GERMAN

Syntax (12 hrs)
Vocabulary (44 hrs)
Reading Program for Graduate Students (26 hrs)

(General Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mf1})

HEBREW (MODERN)

Elementary Modern Hebrew
First Year (60 hrs)
Second Year (first semester--20 hrs)

(Contact: Roberta Stock, Language Laboratory, Foreign Language Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {roberta of mf1})

ITALIAN

Syntax (4 hrs)
Vocabulary (35 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mf1})

JOURNALISM (see also ENGLISH)

Basic Typography (1.25 hrs)

Topics in Newspaper Editing and Design
Headline Writing (1.25 hrs)
Picture Editing (1 hr)

Headline Writing

(Contact: Bill Oates, Dept. of Journalism, Indiana University, Bloomington, Indiana 47401 {oates of iu})

LATIN

Beginning Latin (60 hrs)
Latin Composition (31 hrs)
Vergil's Aeneid (32 hrs)

(Contact: Richard Scanlan, 4072 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1008 {scanlan of mf1})

LAW

Pre-Law--Simulated Law Schools Admissions Test

Law School--Simulated First-Year Law School Experience

Lawyering
- Client Counseling
- Client Interviewing

(Contact: Charles D. Kelso, Indianapolis Law School, 735 West New York Street, Indianapolis, Indiana 46202 {kelso of lawyer})

Future Interests (2 hrs)
Offer and Acceptance (1 hr)
Patents--Non-Obviousness (1 hr)
Utility Regulation (2 hrs)
Statute of Frauds (1 hr)
Insurance Law (12 hrs)
Evidence (2 hrs)
Lessons for Prelaw Students {kelso of lawyer}
Multistate Bar Examination (7.5 hrs)
Legal Abbreviation Drill (2 hrs)
Legal Latin Drill (2 hrs)
Federal Rules of Civil Procedure, Rule 12 (.5 hr)

(Contact: Peter Maggs, 141 Law Building, UIUC, Urbana, Illinois 61801, 217/333-6711 {maggs of law})

LIBRARY SCIENCE

Cataloging and Classification (5 hrs)
- Bibliographic Data Identification
- File Organization--Truncated Search Keys
- Serial Cataloging
- Subject Heading Principles and Marc Tags
- Title Entries

(Contact: Kathryn Luther Henderson, 327 Library, UIUC, Urbana, Illinois 61801, 217/333-6191)

LIBRARY SCIENCE -continued-

Student Guide to the Library
- The University of Arizona Main Library (10 min)
- University of Arizona Branch Libraries (20 min)
- The Card Catalog
  - Sample Card Catalog and Classification Schemes (40 min)
  - L.C. Guide to Subject Headings (20 min)
  - Types of Catalog Cards and Cross References (25 min)
  - Filing Rules: Author/Title (50 min); Subject (40 min)
- A Beginning Library Research Strategy (40 min)

(Contact: Nancy Douglas, Main Library 101, University of Arizona, Tucson, Arizona 85721, 602/884-3619 {douglas of ualib})

LINGUISTICS

Computational Linguistics (7 hrs)

Introduction to General Phonetics (15 hrs)
- Mid-Sagittal View of the Speech Tract
- Laryngeal Mechanisms
- Air-Stream Mechanisms
- Place of Articulation
- Classification of Speech Sounds
- Consonants
- Vowels
- Tone and Stress
- Rhythm
- Sine Wave
- Vowel Formats
- Jakobsonian Distinctive Features
- Sound Pattern of English (SPE) Features

(Contact: Chin-Chuan Cheng, 4101 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1206 {cheng of mflu})

Introductory Transformational Grammar (10 hrs)
- Introduction to Linguistics
- Phonetics and Phonology
- Morphology
- Syntax
- Relative Grammaticality and Idiolect
- Syntactic Deviancies of Deaf Students

(Contact: Stephen Quigley, Children's Research Center, UIUC, Urbana, Illinois 61801, 217/333-1850)

MACHINIST TRAINING

Machinist Training Course (29 hrs) (Aberdeen Proving Ground)
- Conversion of Metric to English
- Solution to Right Triangles
- Ordnance-Sergeant Game
- Grinding Wheels
- Identification of Tool Bits
- Milling Machines
- Indexing
- Introduction to Tapers
- Keys and Keyways
- Introduction to Threads
- Ratio and Proportion
- Thread Forms
- Lathe Speed, Feeds and Depth of Cut
- Lathe Toolbits and Tool Holders
- Unified and American Threads
- MI Drills
- Reading the Micrometer
- Spur Gears
- Square and Acme Threads
- Verniers
- Shaper Toolbits and Tool Holders

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

MATERIALS ENGINEERING

Tension Tests

(Contact: Graham Brown, Room 221, SES, UICC, Chicago, Illinois 60680, 312/996-3428)

MATHEMATICS

Elementary (60-115 hrs)
- Graphing Lessons
  - Graphs I and II
  - Signed Numbers
  - Variables
  - Functions
  - Games
- Whole Numbers Lessons
  - Addition
  - Subtraction
  - Multiplication I and II
  - Division
  - Renaming and Symbols
  - Place Values

MATHEMATICS -continued-

Elementary -continued-
Whole Numbers Lessons -continued-
Word Problems
Miscellaneous
Fractions Lessons
Meaning of Fractions
Mixing Numbers
Equivalence
Addition, Like Denominators
Addition, Unlike Denominators
Meaning of Decimals

(Contact: PLATO Elementary Mathematics Curriculum Group, 202 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7410 {weaver of matha})

High School
Sample Beginning Algebra Lessons (1 hr)

(Contact: Kenneth Travers, 375 Education Building, UIUC, Urbana, Illinois 61801, 217/333-3598)

Modelling and Simulation (3 hrs)

(Contact: Janice Flake, Mathematics Education Department, Florida State University, Tallahassee, Florida 32306, 904/644-1833)

Community College and Adult Education
Signed Numbers (6 hrs)
Divisors and Multiples of Numbers (2 hrs)
Fractions (5.5 hrs)
Decimals (5.2 hrs)
Percent (2.7 hrs)
Roots and Exponents (3 hrs)
Sets (.5 hr)
Algebraic Expression (3 hrs)
Multiplying and Factoring (3 hrs)
Solving Linear Equations (3.5 hrs)
Graphing Straight Lines (5.5 hrs)
Simultaneous Equations (4.5 hrs)
Algebraic Fractions (2.5 hrs)
Plotting Points (2 hrs)
Quadratic Equations (2 hrs)
Function Plotters
Trigonometry (4 hrs)
Slide Rule and Scientific Notation (3.5 hrs)
Common Logarithms (1 hr)
Probability (.5 hr)

(Contact: Lou DiBello, 203B Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-4405 {dibello of cerlcc})

MATHEMATICS -continued-

Community College -continued-
- Sine Ratio Lesson (2 hrs) (NRPDC, San Diego)
- Mathematics Review (Rules, Test Practice Problems in Powers of Ten and Formula Solving) (2 hrs)

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

University
- Linear Algebra
  - Inequalities
  - Introduction to Vectors
  - Introduction to Matrices
  - Matrix Calculator
  - Solving a System of Linear Equations
- Differential Calculus
  - Defining the Tangent to a Curve
  - How a Tangent Approximates a Curve
  - Minimum/Maximum Problems
  - Newton's Method
  - Practicing Differentiation (open-ended)
- Integral Calculus
  - Rules of Integration
  - Volumes of Solids of Revolution
  - Exercising Indefinite Integration (open-ended)
- Analytic Geometry (4+ hrs)
  - Approximations
  - General Curve Drawing
  - Plotting Problems Laboratory
  - Surface Drawing
  - Sine Curve Plotting
  - Graphics Tutorial
- Miscellaneous
  - The Function: a sin (b(x+c))
  - The Function: ln x
  - The Constant π
  - Probability and Statistics
  - Number Theory

(Contact: Samuel Wagstaff, Jr., Department of Mathematics, 221 Altgeld Hall, UIUC, Urbana, Illinois 61801, 217/333-2168 {wagstaff of uimatha})

Review of Algebra

(Contact: Peter Boysen, 206B Curtis Hall, Iowa State University, Ames, Iowa 50010, 515/294-2219 {boysen of ames})

Manipulating Logical Expressions

(Contact: David D. Meller, 357 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500 {dvm of ee})

MATHEMATICS -continued-

University -continued-
Maxima-Minima
Trigonometry for Calculus Students

(Contact: Arunas Dagys, Mathematics Department, UICC, Chicago, Illinois 60680, 312/996-5157 {dagys of uicc})

Calculus Aids

(Contact: L. Evens, Northwestern University, 2003 Sheridan Road, Evanston, Illinois 62201, 312/492-3131 {len evens of nuc})

Drill in Ordinary Differential Equations

(Contact: Prof. M. Mansfield, Kettler Hall, Purdue University at Fort Wayne, Fort Wayne, Indiana 46805, 219/492-5695 {mansfield of pfw})

Numerical Quadrature (Integration) Methods

(Contact: George Friedman, Jr., 128 Digital Comp. Lab., UIUC, Urbana, Illinois 61801, 217/333-7505 {friedman of csa})

Fourier Analysis and Synthesis (open-ended)
Introduction to Base-Ten Logarithms (40 min)
(applicable to community college level also)

(Contact: Don Shirer, 125 Neils Science Center, Valparaiso University, Valparaiso, Indiana 46383, 219/462-5111x210 {shirer of vu})

MEDICINE (also see other Health-related fields in Index)

Anatomy
Upper Member Clinical Application
Anatomy Quiz--Coronary Heart Disease
Anatomy: Planes, Directions, and Movements
Upper Member Anatomy Quiz
ATS Tutorial on the External Muscles of the Eye

Biochemistry (see Index)

Biostatistics
Simulated Statistics Laboratory

Clinical Programs
Physician's Self-Assessment: Problems 1, 2, 3
Simulated Patient Learning Encounters: Problem 1--Dermatology
CRIB--Self-Assessment Tests: Parts 1-6
Drug Identification Game

MEDICINE -continued-

Genetics (see Index)

Health Science Notes--for Comments and Corrections of Health Science Lessons

Health Science Talk--Comments on Health Science and PLATO

Microbiology (see Index)

Pharmacology (see Index)

Physiology (see Index)

(Contact: Dr. Allen Levy, School of Basic Medical Sciences, UIUC, Urbana, Illinois 61801, 217/333-2507 {levy of mc1})

Biostatistics
Error Types and Hypothesis Testing--An Approach to Decision Making

(Contact: Robert Votaw, Building A, Room M033, Health Center, University of Connecticut, Farmington, Connecticut 06032, 203/674-2037 {votaw of conn} or {campi c of conn})

MICROBIOLOGY

Cell Growth
Phases of Cell Growth (3 hrs)

(Contact: Rosanne Francis, 110 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6210 {r francis of microbio})

Microbial Toxins
Algal and Fungal Species
Bacterial Toxins
Clinical Cases

Basic Virology
Structural Characteristics of the Virion
Viral Multiplication (Adsorption through Eclipse)
Viral Multiplication (Replication through Release)
Viral Diagnostic Techniques

Microquiz
Respiratory Infections
Gastrointestinal Infections

(Contact: Dr. Allen Levy, School of Basic Medical Sciences, UIUC, Urbana, Illinois 61801, 217/333-2507 {levy of mc1})

MICROBIOLOGY -continued-

Serial Dilution Problems (25 min)

(Contact: Gary Hyatt, P.O Box 4348, Department of Biological Sciences, UICC, Chicago, Illinois 60680, 312/996-2797 {hyatt of uiccbio})

MUSIC

Elementary Music (1.5 hrs)
- Complete the Measure
- Keyboard Drill
- Notes and Rests
- Rhythm Exercises
- Time Signatures

Instrumental Methods (19 hrs)
- Bassoon, Clarinet, Euphonium, Flute, Horn, Oboe, Percussion, Saxophone, Trombone, Trumpet, Tuba

Jazz Chording (2 hrs)
Kodaly Handsignals and Solmization (1 hr)
Micro-Teaching (.5 hr)
Music Box Demonstration

Music Games (.5 hr each)
- Five X Seven
- Keyspinner
- Music Canon
- Musical Squares

Percussion Terminology (5 hrs)
Scale Structures (1 hr)
Tests and Measurements (5 hrs)
Theory-Figured Bass Realization (.75 hr)
Transposition and Score Reading (1 hr)
Violin Fingering Drill (.5 hr)

(Contact: David Peters, 3004 Music Building, UIUC, Urbana, Illinois 61801, 217/333-3064 {peters of music})

Introduction to Pitch Sets (M12 Notation)
Music-Staff Display Generating Routine

(Contact: Nathan Syfrig, Indiana University, Bloomington, Indiana 47401, 812/337-3666 {nate of iumusic})

NURSING

Maternal-Child Nursing
- Introduction to MCH Nursing
- Anatomy: Review of Female
- Obstetrical Anatomy I and II
- Vocabulary Quizzes for Obstetrical Anatomy
- Mechanism of Labor in a Normal Delivery
- Vocabulary Quiz for Mechanism of Labor
- Fetal Circulation
- Vocabulary Quiz on Fetal Circulation
- Placental Transfer
- Vocabulary Quiz on Physiology
- Physiology of Reproduction

Pharmacology
- Major Drug Categories

(Contact: Maryann Bitzer, 306 E. Colorado, Urbana, Illinois 61801, 217/328-2094 {mdb of cerl})

- Body Temperature Balance
- Introduction to Shock

(Contact: Chris Church, Indiana University School of Nursing, 1407 E. Tenth St., Bloomington, Indiana 47401, 317/337-7089 {church of iumed})

- Affective Illnesses, Their Causes and Treatment
- Anxiety
- Brain Trauma
- Concept of Dependence
- Neurosis
- Patient Care Problems
- Pediatric Medication Administration
- Post Operative Nursing Care
- Process of Lactation
- Simulated Clinical Encounters in Nursing-Midwifery

(Contact: Richard Trynda, Room 824, College of Nursing, UI Medical Center, 845 S. Damen, Chicago, Illinois 60680, 312/996-7937 {trynda of nursing})

- Welcome to PLATO
- Reproductive Anatomy Review (.5 hr)
- Influence of Hormones on Reproduction (.5 hr)
- Postpartum Involution (.75 hr)
- Medications for Use in Obstetrics (1-1.5 hrs)
- Introduction to the Labor Process (1.5-2 hrs)
- Fetal Circulation Game (1.5-2 hrs)
- Infant Pulmonary Circulation (.5 hr)
- MCH Vocabulary Drill (1-2 hrs)
- Labor Case Study and Multigravida (1.5 hrs)
- Lamaze Theory (.5 hr)

NURSING -continued-

Fetal Heart Rate Monitoring (.75 hr)
Complicated Labor (3 studies)
Labor Case Study--Primagravida
Math Review for Nurses

(Contact: Pat Tymchyshyn, Parkland College, 2400 West Bradley, Champaign, Illinois 61820, 217/351-2292 {tym of park})

NUTRITION

Basic Principles of Nutrition (4 hrs)
- Overview
- Digestive Organs and Functions
- Carbohydrates
- Lipids
- Proteins
- Energy
- Four Food Groups

(Contact: Frances LaFont, 351 Bevier Hall, UIUC, Urbana, Illinois 61801, 217/333-3936 {lafont of nutr})

PHARMACY AND PHARMACAL SCIENCES

Factors Affecting Drug Solubility
Effect of pH on Partition Coefficient
Review of Graphical Methods
Kinetics of Aspirin Analysis
Interpreting Blood-Level Curves I
Quantitative Structure-Activity Relations
Organic Acid-Base Theory
Nomenclature of Aldehydes and Ketones
Carboxylic Acids Nomenclature I and II
Nomenclature of Amines
Clinical Methods of Analysis
Enzymatic Methods of Analysis
Pharmacy Calculation Exercises
Platoville Squares Game
Physiological Parameters Review
Medical Abbreviations Review
Medical Terminology Review
Parameters Following Review Game
Parameters Following Simulation
Amino Acid Metabolism Case Studies
Pharmacy Typing Exercises
Scar Formation Case Study
Obesity Case Study

PHARMACY AND PHARMACAL SCIENCES -continued-

Vitamin C Deficiency Case Study
Molecular Drawing and Viewing Aids for Organic Molecules
Assorted CMI Grade Reporting Lessons

(Contact: Steve R. Deiss, Purdue University School of Pharmacy and Pharmacal Sciences, West Lafayette, Indiana 47907, 317/749-2204 {deiss of phar})

Introduction
- Pharmacokinetics I: Drug Administration, Absorption, and Distribution
- Pharmacokinetics II: Drug Action, Metabolism, and Excretion
- Introduction to General Pharmacology I: Absorption and Distribution
- Introduction to General Pharmacology II: Metabolism and Excretion
- Introductory Pharmacology: Fetal Pharmacology
- Pharmacokinetics I: Intro. to Absorption, Distribution, Metabolism and Excretion
- Pharmacokinetics II
- Introductory Pharmacology: Review

Autonomic Nervous System
- Neurohumor Metabolism: Metabolic Pathways of Primary Neuromediators
- Pharmacology of Adrenergic Agents
- Autonomic Pharmacology
  - General Introduction and Review
  - Synthesis and Biotransformation of Neurotransmitters
  - Cholinergic Mechanisms and Uses
  - Review
  - Adrenergic Mechanisms and Uses
  - Arterial Blood Pressure in the Dog

Central Nervous System
- Sedatives and Hypnotics
- Anticonvulsant Quiz
- General Anesthesia
- Anesthesia Case Study
- Anesthesia Quiz
- Antidepressant Quiz
- Stimulants and Hallucinogens
- Asperin-type Analgesics and Anti-Inflammatory Agents
- Analgesia Review
- Review Quiz

Endocrine Drugs
- Adrenal Steriods
- Oral Contraceptives
- Thyroid Agents

Cardiovascular
- Case History: Management of Hypertension
- The Treatment of Cardiac Arrhythmias
- Drugs: Hematinic Agents

PHARMACY AND PHARMACAL SCIENCES -continued-

Chemotherapeutics Case Series
Antibiotics Consult I-V
Review Questions

Vitamins
Drugs: Introduction to Vitamins

Toxicology
Case History: Emergency Admission from Unexpected Drug Reaction
General Review

Quizzes and Miscellaneous
Structure Quiz: Structure Identification of Selected Pharmaceutical Agents
Drugs
Anti-Inflammatory Quiz
Anti-Inflammatory Agents--Consult
Local Anesthetic Agents
Local Anesthetic Review
Diuretics Quiz

(Contact: Dr. Allen Levy, School of Basic Medical Sciences, UIUC, Urbana, Illinois 61801, 217/333-2507, {levy of mc1})

PHOTOGRAPHY

Basic Camera Operation (1 hr)

(Contact: James Evans, 58 Mumford Hall, UIUC, Urbana, Illinois 61801, 217/333-4785)

PHYSICAL EDUCATION

The Eshkol-Wachmann Movement Notation System (3-4 hrs)

(Contact: Prof. Annelis Hoyman, 212 Freer Gymnasium, UIUC, Urbana, Illinois 61801, 217/333-0016 {hoyman of pea})

Projectile Motion in Biomechanics (1 hr)
Biomechanics of Running (1-2 hrs)
Visual Perception--Testing Figure-Ground Perception (.5 hr)
Attitudes Towards High School Physical Education (.5 hr)

(Contact: M. Reece, 201 Kenney Gym, UIUC, Urbana, Illinois 61801, 217/333-2484 {reece of pea})

PHYSICS

General 'Service' Lessons (open-ended)
- Calculator, Function Plotter, Root Finder, f(x)=0
- Plotters: Polar, Intensity, Parametric
- GRAFIT--Programmable Plotter {b sherwood of phys}
- Mini-Calculator
- Numerical Integration and Least Squares
- Matrix Routines: Simultaneous Linear Equations, Eigenvalues and Negative Vectors
- Matrix Inversion (open-ended) {shirer of vu}
- 3-D Plotter, Projections
- Fourier Analysis and Synthesis {shirer of vu}

(Contact: Carol D. Bennett, 267 Physics Building, UIUC, Urbana, Illinois 61801, 217/333-7589 {bennett of phys})

Intermediate Light (2 hrs)
- Ray Tracing Through a Single Spherical Refracting Surface
- Optical Path Length as a Function of Displacement
- Fermat's Principle

(Contact: David C. Sutton, 329 Physics Building, UIUC, Urbana, Illinois 61801, 217/333-4359 {sutton of phys}).

Classical Mechanics (60 hrs)
- Service Lessons
  - Introduction to PLATO
  - Comments on PLATO Physics Lessons
  - Physics PLATO Classroom Schedule
  - Calculator and Function Plotter
  - GRAFIT Programming Facility
- General Mechanics Lessons
  - 8 Mechanics Problems
  - 10 Multiple-Choice Mechanics Questions
  - Interterminal Problem Solving Contest
  - Interterminal Game on Physics Formulas
  - Games Involving Classical Mechanics
  - Relative Motion: Boat on a River
- Vectors
  - Introduction to Vectors
  - Drill on Vector Addition and Subtraction
  - Homework: Vectors
- Kinematics
  - One-Dimensional Kinematics I and II
  - Homework: One-Dimensional Kinematics
  - Two-Dimensional Kinematics
  - Homework: Two-Dimensional Kinematics
  - I Shot an Arrow into the Air...
  - Graphical Kinematics I and II

PHYSICS -continued-

Classical Mechanics -continued-

Dynamics

Forces and Free-Body Diagrams
Free-Body Diagrams Without Rotation
Homework: Force and Simple Dynamics
Homework: Dynamics
Game Balancing Three Forces

Work and Kinetic Energy

Work and Kinetic Energy
Homework: Work and Kinetic Energy
Work Done by Position-Dependent Forces
The Work-Energy Equation
Homework: Conservation of Energy

Momentum

Conservation of Momentum
Homework: Momentum and Collisions
Drill on Momentum in Collisions
Center-of-Mass Drill

Rotational Dynamics

Moment of Inertia and Roational Kinetic Energy
Torque and Angular Momentum
Homework: Rotational Dynamics
Free-Body Diagrams (with Rotation)
Homework: Rotation Problems
Homework: Torque and Angular Momentum

Simple Harmonic Motion

Oscillations: Simple Harmonic Motion
Homework: Simple Harmonic Motion

Gravitation

Homework: Gravitation

Laboratory

Combining Experimental Errors

(Contact: Bruce Sherwood, 272 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6210 {b sherwood of phys})

Electricity and Magnetism

Elementary

Charge Game with Introduction to Electric Fields
Current vs Time for rl, rc, rlc Circuits
Faraday's Law

Advanced

Laplace's Equation--Relaxation
Laboratory Experiment Aids {gorey of o}

Waves, Optics, and Modern Physics (25+ hrs)

Wave Phenomena

Traveling Waves and the Wave Equation
Vibrating String Experiment
Shock Waves from an Airplane

PHYSICS -continued-

Waves, Optics, and Modern Physics (25+ hrs) -continued-
- Wave Phenomena -continued-
  - Addition of Waves: $\cos(k_1x)+\cos(k_2x)$, etc.
  - Resonances in Pipes plus an Experiment
- E-M Radiation and Physical Optics
  - Polarizers
  - Doppler Effect
  - Slit Interference and Diffraction
  - Phase (Vector) Diagrams plus a Quiz
  - Spectroscope Apparatus Experiment
- Geometric Optics
  - Snell's Law: Includes 2 Games
  - Thin Lenses: Ray Tracing Exercises
  - Plane Mirrors: Graphical Exercises
  - Spherical Mirrors: Numerical Exercises
  - Signs and Ray Diagrams: Mirrors, Lenses, Surfaces
  - Homework Problems
  - Refracting Plane Surface: Ray Diagrams
- Particles and Waves
  - Photoelectric Effect
  - Compton Effect
- Quantum Mechanics--Elementary
  - Plots of Wave Packets
  - Heisenberg Uncertainty Principle
  - Infinite Square-Well Potentials
  - Finite Potential Wells and Barriers
  - Exercises with Potential Wells
  - Atomic Quantum Numbers: n, l, m, s
  - Nuclear Decay Processes, Half-Life
  - Vibrations/Rotations in Diatomic Molecules
  - Nuclear Reactions: alpha, beta decays
- Review Questions
  - Multiple Choice Questions from 1972-1973 Hourly Exams
  - Quantum Mechanics Problems from 1973-1974 Hourly Exams

(Contact: Carol D. Bennett, 267 Physics Building, UIUC, Urbana, Illinois 61801, 217/333-7589 {bennett of phys})

Acoustics
- Vibrating Systems (60 min)
- Musical Acoustics
- Decibels (45 min)

Elementary Nuclear Physics
- Subnuclear Particles, Conservation Laws, Reactions (1.5 hrs)

Elementary Thermodynamics
- Thermal Equilibrium (30 min plus open-ended lab)

PHYSICS -continued-

Special Theory of Relativity
Introduction (20 min)
High Speed Physics (45 min)
Energy and Momentum (45 min)

(Contact: Don Shirer, 125 Neils Science Center, Valparaiso University, Valparaiso, Indiana 46383, 219/462-5111x210 {shirer of vu})

Quantum Mechanics--Intermediate and Advanced (10+ hrs)
Guided Exercises
Addition of Angular Momentum
Matrix Algebra
Guided Self-Consistent Calculation (2-5 hrs)
Helium Atom--Electron Potential and Wave Function
Wave Functions (open-ended)
Finite Well and Barrier Potentials
Arbitrary Potentials, V(x)
Radial Potentials, V(r), and Phase Shifts

(Contact: Carol D. Bennett, 267 Physics Building, UIUC, Urbana, Illinois 61801, 217/333-7589 {bennett of phys})

PHYSIOLOGY (see also BIOPHYSICS, MEDICINE, PHARMACOLOGY)

Simulation of Human Cardiovascular System

(Contact: Eric Jakobsson, Department of Physiology, UIUC, Urbana, Illinois 61801, 217/333-3918 {mckown of physio})

Neurophysiology

(Contact: Dr. Allen Levy, School of Basic Medical Sciences, UIUC, Urbana, Illinois 61801, 217/333-2507 {levy of mcl})

Drill on Cat Muscles (30-40 min)

(Contact: Charles Guerra, College of Pharmacy, UIMC, Chicago, Illinois 60612, 312/996-7190 {guerra of uimc})

PILOT TRAINING

Primary Training
Private Pilot Test
Pre-flight Planning
Test on VOR Usage

Advanced Training
Holding Pattern Training

(Contact: Stanley Trollip, Aviation Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-3162 {trollip of arlc})

Sequence Reports (Weather) (30-40 min)

(Contact: David Lombardo, P.O. Box 2456, Station A, Champaign, Illinois 61820, 217/356-4939 {lombardo of ed})

POLITICAL SCIENCE

Congressional Candidates (.5 hrs)
Congressional Chairman and the Legislative Process (.5 hr)
Teacher Union Bargaining (.5 hr)

(Contact: Don Emeriek, 359 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500 {don emerick of mtc})

POPULATION DYNAMICS

For over 130 countries and regions

- Population Projections (.5-3 hrs)
- Demand for Energy (.5 hr)
- Food Program (2 hrs)
- Economic Development (.5 hr)
- Educational Costs and Enrollment (1 hr)
- Two Sex Model (.5 hr)
- Regional Demography Models (.5 hr)
- Labor Force Analysis (1 hr)
- Construction of Life Tables (1 hr)
- Population History (1 hr)
- Population Lessons (1.5 hrs)
- World Petroleum Flow (.5 hr)
- Energy Demand and Supply in U.S.A. (1 hr)
- Nation's Current Energy Conditions (1 hr)

(Contact: P. Handley or C. S. Roh, 66 Coordinated Science Laboratory, UIUC, Urbana, Illinois 61801, 217/333-3827 {roh of pdg})

PSYCHOLOGY

Descriptive Statistics (14 hrs)
- Moments, Transformations, Z-Scores, Normal Curves
- Permutations and Combinations
- Random Sampling and Probability
- Binomial Distribution
- Sampling Distributions with Demonstration of Central Limit Theorem
- Hypothesis Testing and Power
- Analysis of Variance
- Correlation and Regression
- Chi-Square
- Matrix Algebra

General Psychology
- Motivational Control System (1 hr)
- Neural Network Demonstration (2 hrs)
- Psychology Experiments--Short Term Memory Experiment (1 hr)
- Reliability and Validity
- Multitrait-Multimethod Procedure

Social Psychology (6 hrs)
- Theory: Defined and Evaluated
- Attitude Theory and Measurement
- Dissonance vs Self-Perception Theory
- Asch Conformity Study
- Personal Space Demonstration
- Diffusion of Innovations
- Subject Roles Demonstration

PSYCHOLOGY -continued-

Social Psychology -continued-
- Social Choice Research Demonstration
- Prisoner's Dilemma Explanation & Interactive Demonstration
- Game Theory and the Prisoner's Dilemma Game
- The N-Person Prisoner's Dilemma Game
- Deutsch and Krass Tracking Game

(Contact: Jerry L. Cohen, 219D Psychology Building, UIUC, Urbana, Illinois 61801, 217/333-2578 {cohen of psych})

Operant Learning (open-ended, 5-6 hrs)

(Contact: R. A. Avner, 350 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500x20 {avner of s})

READING

[Instructional materials are in conceptual areas which are modular in structure, each activity designed to require no more than 15 minutes (average student completion time about 8 minutes). Most modules are 'free-standing.'] (30 hrs)

- Start the Day Activities
- Orientation Activities
- Practice with "Next" and "Yes and No"
- Practice with the "Help" Key
- Practice Typing Your Name
- Letter Name Super-Test
- Visual Discrimination
  - Letters
  - Letters, Rotations and Reversals
  - Simple Word Forms
- Word Detail
  - No Relationships and Complete Reversals
  - Add and Omit Letters
  - Final and Medial Substitutions
  - Final and Medial Reversals
- Letter Names (A-Z)
- Review Activities for Letter Names
- Letter-to-Sound Correspondences
- Favorite Stores for Children
- Paced Stories for Comprehension
- Sight Words
  - (the,boy,is,happy,one,girl,was,sad,you,and,I,run,we,are,not,open, they,will,be,closed,did,she,run,fast)
- Auditory Discrimination

(Contact: John Risken, 200E Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7409 {john r of reading})

RUSSIAN

Cyrillic Alphabet
Alphabet Order (4 hrs)
Russian Reading Lessons (89 hrs) (2 semesters)
(based on Dewey-Mersereau, Reading and Translating Contemporary Russian)
Laboratory Drills for Russian 101, 102 (47 hrs) (2 semesters)

(Contact: Constance Curtin, 355 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-6500x45 or 217/333-8203 {curtin of mfl})

Translations of Some PLATO Lessons (used for demonstration in Russia in 1973)

(Contact: Peter Maggs, 141 Law Building, UIUC, Urbana, Illinois 61801, 217/333-6711 {maggs of law})

Syntax (8 hrs)
Vocabulary for Tourists (8 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl})

SOCIAL WELFARE

Poverty Lines
English Poor Laws (to 1601)
Charity Organization Society and Neighborhood Movements
Overview of the Social Welfare System
Determining Elibility in Public Assistance
Negative Income Tax

(Contact: Marilyn Flynn, 1207 W. Oregon, UIUC, Urbana, Illinois 61801, 217/333-1638)

SOCIOLOGY

Sociological Statistics--Laboratory Exercises (5+ hrs)

(Contact: Phyllis Ewer, Sociology Department, UICC, Chicago, Illinois 60680, 312/996-3009 {ewer of uicc})

SPANISH

Vocabulary
Spanish Vocabulary via Cognates
Multilingual Drill
Introduction to Spanish via the "GLOPAR" Method (15-18 hrs)
Verb Conjugation Drills (4 hrs)
Beginning Spanish
Cultural History of Spain for Beginners

(Contact: Armando Armengol, G89 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-9776 {armengol of mfl})

Syntax (14 hrs)

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl})

SPEECH and HEARING SCIENCE

Phonetics and Phonology
Simple Reading Drill (20 min)
Consonant Transcription (20 min)
Vowel and Diphthong Transcription (25 min)
Syllable Transcription (40 min)
Simulation of Speech Sound Production (open-ended)
Organogenetic Feature Drill (open-ended)
Distinctive Feature Reasoning (open-ended)
Phonetic Crossword Puzzles
Hangman in Phonetics

Finger Spelling
Simulation of Audiological Testing
Anatomical Terminology

(Contact: Elaine Paden, 335 Illini Hall, UIUC, Urbana, Illinois 61801, 217/333-3050 {j wilson of unidel})

STATISTICS (see also PSYCHOLOGY)

Statistical Laboratory (open-ended, 5 hrs typical use)
Statistical Service Package (open-ended, 8 hrs typical use)

(Contact: R. A. Avner, 350 ERL, UIUC, Urbana, Illinois 61801, 217/333-6500 {avner of s})

SWEDISH

Syntax (in preparation)
Translations of a PLATO Mathematics and a Biology Lesson

(Contact: M. Keith Myers, G93 Foreign Languages Building, UIUC, Urbana, Illinois 61801, 217/333-1719 {myers of mfl})

URBAN STUDIES

Social Policy Impact Models (2 hrs)
Education Budget Allocation

(Contact: James Anderson, Housing Research and Development, 1204 W. Nevada, UIUC, Urbana, Illinois 61801, 217/333-6532)

VEHICULAR TRAINING

Vehicular Training Course (60 hrs) (Chanute Air Force Base)
Basic Electricity
Electrical Current, Voltage, Resistance
Series and Parallel Circuits
Electrical Schematics
Electromagnet--Magnetism
Battery Ignition Systems
Battery Hydrometer Drill
Auto Lighting and Warning Systems
Electronic Ignition/Components and Operation
Ignition Game
DC Generators
DC Regulators
Automotive Oscilloscope
Introduction to Engine Fundamentals
Principles of Gas Engines
Engine Classification
Evaporative Emissions
Cooling Systems
Crank-Motor Diagnosis
Cranking Motors
Crankcase Ventilation
Fuel Pump Volume and Pressure Tests
Automatic Transmissions/Torque Converters/Fluid Coupling
Valve Train Assembly
Carburetor Drill
Power Steering
Clutches
Differentials
Wheel Alignment
Suspension Systems
Propeller Shafts, Uni-Joints
Lubrication/Oil System Components and Oil Flow

VEHICULAR TRAINING -continued-

Vehicular Training Course -continued-
- Air and Exhaust Systems
- Basic Hydraulics
- Hydraulic Schematics
- Brake Systems
- Hydraulic Brake System
- Air Brake Systems
- Diesel Engines
- Transfercase and Power Take Offs
- Measurements
- Soldering

(Contact: Larry D. Francis, MTC Project, 361 Engineering Research Laboratory, UIUC, Urbana, Illinois 61801, 217/333-7465 {ld francis of mtc})

VETERINARY MEDICINE

Anatomy
- Veterinary Terminology Program (6 hrs)
- Anatomical Terminology (Directions, Locations and Motions) (2 hrs)
- Veterinary Cytology (5 hrs)
- Principles of Circulation (3 hrs)
- Histology of the Skin (4 hrs)
- Histology Superquiz (6 hrs)
- Neuroanatomy of Spinal Reflex Loops (3 hrs)
- Innervations of the Thoracic and Pelvic Limbs (10 hrs)
- Nervewar (10 hrs)
- Termwar (10 hrs)
- Eye Anatomy Quiz (3 hrs)

Applied Anatomy
- The Pupillary Light Reflex (2 hrs)

Clinical and Laboratory Practice
- Heart Valve Locations (1 hr)
- Identification of Normal and Abnormal Heart Sounds (4 hrs)
- Canine Cardiac Conditions (5 hrs)
- EKG Interpretation (6 hrs)
- Canine Eye Diseases (16 hrs)
- Canine Neurological Diagnosis (15 hrs)

Clinical Pathology
- Clinical Pathology Exercises on Anemia (2 hrs)
- Cases in Clinical Pathology (9 hrs)
- White Blood Cell Counts and Differentials: An Exercise in Interpretation (4 hrs)
- Clinical Renal Pathology (1 hr)
- W. C. D.--White Cell Defense (1 hr)

VETERINARY MEDICINE -continued-

Diseases of Poultry
- Poultry Diseases (15 hrs)
- Slide Review--Poultry Diseases (2 hrs)

Food Hygiene and Public Health
- Exotic Diseases (5 hrs)
- Antemortem Inspection Procedures and Humane Slaughter (3 hrs)
- Postmortem Inspection Procedures (5 hrs)
- Simulated Antemortem and Postmortem Inspections (6 hrs)
- Veterinary Public Health Aspects of Milk and Dairy Products (3 hrs)
- Pasteurization of Milk and Dairy Products (2 hrs)
- Foodborne Disease Investigation (2 hrs)
- Transmission of Zoonoses (2 hrs)
- Computer-managed Instruction in Veterinary Public Health (6 hrs)

Medicine (Veterinary Diagnostic Cases)
- Veterinary Diagnosis Program (39+ cases, 15-45 min each)
- Bovine Diagnostic Cases (6 hrs)
- Canine Diagnostic Cases (10 hrs)
- Equine Diagnostic Cases (6 hrs)
- Porcine Diagnostic Cases (3 hrs)
- Feline Diagnostic Cases (1 hr)
- Laboratory Animal Diagnostic Cases (1 hr)

Microbiology
- Laboratory Characteristics of Individual Bacteria (24 hrs)
- Identification of Bacteriological Unknowns (12 hrs)
- Veterinary Mycology Program (10 hrs)
- Identification of Viral Unknowns (11 hrs)
- Self-Assessment Program--Microbiology (5 hrs)
- Fundamental Bacteriology (5 hrs)

Nutrition
- Nutrition Problems (10 hrs)
- The Pearson Square (5 hrs)

Parasitology
- Identification of Arthropods Important in Veterinary Medicine (7 hrs)
- Quiz on Internal Parasites of Domestic Animals (2 hrs)
- Protozoa of Veterinary Importance (4 hrs)
- Life Cycles of Protozoa (2 hrs)
- Student Self-Assessment Program in Parasitology (1 hr)

Pathology
- Common Canine Tumors (4 hrs)
- Student Self-Assessment Program in Pathology (3 hrs)

Pharmacology
- Quiz on Drugs Used in Veterinary Medicine (6 hrs)
- Formulation of Drug Dosage Regimens (A Simulation) (4 hrs)

VETERINARY MEDICINE -continued-

Physiology
- The Bioelectric Properties of Cell Membranes (2 hrs)
- Electrocardiography (1 hr)
- Hormonal Control of Carbohydrate and Lipid Metabolism (2 hrs)
- Essentials of Endocrinology (5 hrs)
- Review of Endocrinology (4 hrs)
- Identification of Hormone Unknowns (10 hrs)
- Fundamentals of Urine Formation (2 hrs)
- The Cardiac Cycle (2 hrs)
- Pulmonary Volumes and Capacities (3 hrs)
- Student Self-Assessment Program in Physiology (2 hrs)

Radiology and Nuclear Medicine
- Formulation of a Radiographic Technique Chart (3 hrs)
- Fundamentals of Radiology (6 hrs)
- Diagnosis of Canine Hip Displasia (2 hrs)
- Diagnostic Radiology (5 hrs)
- Gamma Ray Spectrometer (1 hr)
- Basics of Radioisotope Counting (2 hrs)

Surgery
- Operation of Anesthetic Equipment (10 hrs)
- Surgical and Clinical Instruments (10 hrs)
- Acid Base Balance in Anesthesiology (1 hr)

Theriogenology
- Student Self-Assessment Program in Theriogenology (3 hrs)
- Anatomy and Physiology of Reproduction (3 hrs)
- Gestation and Parturition (4 hrs)
- Complications of Parturition (4 hrs)
- Pregnancy Diagnosis and Infertility (4 hrs)

Veterinary Economics and Business Management
- Financial Analysis of a Veterinary Practice (Case Studies) (9 hrs)

Miscellaneous
- CVM Medical Library (1 hr)
- Veterinary Cartoons
- Vetmed Calculator (3 hrs)
- See and Make Comments About CVM PLATO (2 hrs)

(Contact: George Grimes, 161 Basic Science, UIUC, Urbana, Illinois 61801, 217/333-7467 {grimes of ve})