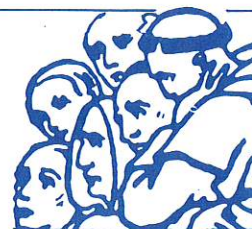




Thomas Aquinas College NEWSLETTER

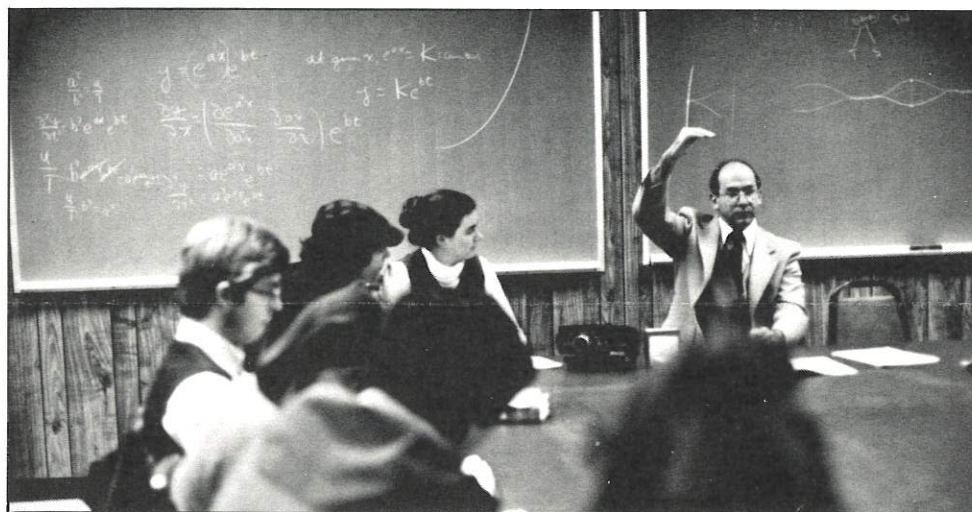
Winter 1982

10000 N. Ojai Rd., Santa Paula, California 93060



TUTORIAL INVESTIGATES MODERN PHYSICS

Tutor Ronald J. Richard, author of the article presented below, earned his Ph.D. in astronomy at UCLA. A former research engineer with the Jet Propulsion Laboratory, he is shown, right, discussing waves with students in his Senior Laboratory tutorial.



Physics is the Anglicised form of the Greek word for "nature". This is not its only meaning, though. It also means the "science of nature," i.e., the "study of natural things". Thus, one who studies physics studies not only nature itself, but also the science of things as they exist naturally.

Modern physics (physics since the time of Galileo and Newton) is a particular kind of study of particular kinds of things. Only inanimate things, or things insofar as they can be considered to be inanimate, are considered, and the study is mathematical. This restriction is well illustrated by the apple that is supposed to have fallen on Newton's head. Newton was not interested in the apple as an edible thing; he only considered it insofar as it was something that fell.

As an object falls it changes its place. And change has always been a primary concern of physicists, ancient and modern. What sets the modern physicist apart from his ancient counterpart is that he deals only with quantitative changes—how fast one thing falls, how much time it takes for a pendulum to make one complete swing, et cetera.

At Thomas Aquinas College, the study of modern physics begins in the Junior Laboratory, where Galileo's *Discourses and Mathematical Demonstrations Concerning Two New Sciences* and Newton's *Mathematical Principles of Natural Philosophy* are the texts that are read. Both books deal with local motion, which is motion from one place (position, locality) to another. Galileo's treatment is descriptive. That is, Galileo is solely concerned with knowing where a moving body is and how fast it is moving. This kind of study is called *kinematics*. Newton, on the other hand, wants to know why a body is moving the way it is. For him, motions are explained as resulting from combinations of inertial (internal)

forces and impressed (external) forces. This kind of study is called *dynamics*.

The Senior Laboratory tutorial begins with a further consideration of kinematics and dynamics. Speed and acceleration are defined mathematically, as, respectively, the rate of change of position and the rate of change of velocity with respect to time. Galileo and Newton, on the other hand, never define these quantities, being satisfied with considering only ratios of them. Thus, for these two authors, the statement that one body moves twice as fast as another simply means that in a given amount of time one body goes twice as far as the other.

At the root of the difference between the ancient and modern views about how speed and acceleration are to be treated mathematically lies the difference between Euclidian mathematics and algebra. Galileo and Newton use Euclidian mathematics, while physicists now use algebraic mathematics, including calculus. The subject of Senior Laboratory is physics of this kind. As was said above, it begins with a study of kinematics and dynamics. In this part of the tutorial, some matters discussed by Galileo and Newton are reconsidered from an algebraic point of view. Other matters are treated, because they are interesting in themselves or because they will be useful later in the tutorial. This part of the tutorial ends with a treatment of pendulum motion.

Pendulum motion being repetitive leads into the second part where another kind of repetitive phenomenon is studied, namely waves. This study commences with a consideration of the most familiar kind of waves, water waves. Simple kinematic properties of waves are then investigated, both theoretically and experimentally. Next, the dynamics of waves on a taut string is

considered. This part of the tutorial concludes with a study of the net effect on a medium when it contains more than one wave. In this part, students also see that moving waves can combine in such a way as to produce so-called "standing waves", which study culminates in a consideration of the so-called interference and diffraction phenomena.

The last major part of the tutorial treats optics and light. Experimental investigations show that optical phenomena have properties mathematically identical with those of waves. The evidence is very strong that either light itself is a wave or it has a wave associated with it. This consideration logically raises the question of whether or not light moves. Having arrived at a point where there is a reason to think that light does move, students then study experiments designed to measure the speed of light. The tutorial concludes by comparing the wave theory of light with Aristotle's statements about light in his *De Anima*.

Excerpts from the *De Anima*, and St. Thomas' *Commentary on De Anima*, Newton's *Optics*, and Huyghen's *Treatise on Light*, are the only materials read in the Senior Laboratory that can be classified as "Great Books". Students in this tutorial read a laboratory manual almost exclusively. The Freshman and Sophomore Laboratory tutorials also use manuals. The manuals used in the latter two tutorials were written at St. John's College, while the Senior Laboratory manual was written by a Thomas Aquinas College tutor and is designed to meet the specific needs of our seniors. It is being used for the first time this year, and is fulfilling the purpose for which it was designed, to consider some matters of importance in physics in such a way as to integrate the tutorial with other tutorials in the program.

ARCHBISHOP ELKO, E. VICTOR MILIONE ADDRESS PRESIDENT'S COUNCIL MEETINGS

Meetings sponsored by the Thomas Aquinas College President's Council in Chicago and New York City in November heard addresses by Archbishop Nicholas T. Elko and Mr. E. Victor Milione, members of the Board of Visitors, on the aims and elements of undergraduate education.

Speaking to the more than 60 guests, including alumni of the College, attending the President's Council reception and dinner at the The Cliff Dwellers club in Chicago on November 4, Archbishop Elko, Auxiliary Archbishop of Cincinnati, characterized education at Thomas Aquinas College as sound, systematic, and contributing to the student's faith.

Addressing this Chicago annual meeting, Dr. Ronald P. McArthur, president of the College, said of studies at Thomas Aquinas: "Our education sticks with our graduates, for it is sound, elevated, and demands dedication

GIFTS EXCEED \$500,000 FOR FIRST HALF OF FISCAL YEAR

More than \$500,000 in gifts for operations and scholarships was received during the six months ending December 31, 1981. Gifts came from several hundred sources, including individuals, corporations, and foundations from throughout the U.S.

Of special importance was a gift of \$110,000 from a friend of the College. This gift was designated for use in improving faculty compensation and for funding an additional tutor.

The Dan Murphy Foundation of Los Angeles also provided a major grant, contributing \$50,000 for the College operating budget.

The Student Financial Aid Program was supported again this year by the Louisa Watson Trust of Los Angeles. A grant of \$53,000 from this trust has made financial aid possible for a substantial number of deserving Thomas Aquinas students. It represented an increase of 32.5% over the amount given to the College by the Louisa Watson Trust in the 1980-1981 fiscal year.

Grants of \$10,000 each were received from the Drum Foundation of San Francisco and the Texas Educational Association of Dallas.

In commenting on the contributions received during the first half of the 1981-1982 fiscal year, Dr. Ronald P. McArthur, president of Thomas Aquinas College, said: "We are grateful, as always, to those whose donations make the work of Catholic liberal education possible. Our gift income has been remarkable, considering the economic situation, but much more support will be needed within the next few months."

ANNUAL REPORT READY

Copies of the 1981 Annual Report, which marks the completion of the College's first decade, are available upon request. The report includes special sections on the history, chronology, development plans, and educational achievements of the College. Also available are the 1982-83 *Bulletin* and the revised "Introduction to Thomas Aquinas College" brochure.

and work. Our experience has been that our graduates tend to remain faithful and do not bow to the world."

Mr. Milione, president of the Intercollegiate Studies Institute, spoke to approximately 60 guests of the President's Council at a reception for Dr. McArthur at The New York Yacht Club on November 11.

In his address, "Education for What?", Mr. Milione said that a college should broaden the student's knowledge of the content of the various disciplines and their bearing on one another so the student can "...achieve an overarching view of knowledge in all its branches, and its bearing upon life in all its complexity." He termed the course elective system in colleges a "disservice to the students and to the community at large because it tends to encourage ignorance in many areas of knowledge vital to the enrichment of personal life and the maintenance of civilization and culture."

Carl N. Karcher, President's Council National Chairman

Carl N. Karcher, chairman of the board, chief executive officer, and founder of Carl Karcher Enterprises, Anaheim, has been appointed national chairman of the President's Council of Thomas Aquinas College. He took office in October, succeeding Patrick James Kirby who served as the council's national chairman from 1980 to 1981.

In making the appointment, Ronald P. McArthur, president of Thomas Aquinas, said: "We deeply appreciate Mr. Karcher's acceptance of this position. He knows the College well, has been one of its most generous benefactors, and he is one of the most active members of the President's Council. I know that we can look forward to the continued development of the council under his leadership."

Mr. Karcher heads a food service corporation that owns and operates more than 300 restaurants throughout California and in Las Vegas, Nevada. He serves in leadership roles with more than 20 educational, cultural, civic, and other groups.

A Knight of Malta since 1976, Mr. Karcher has been honored by the International Foodservice Manufacturers Association and the Freedoms Foundation. He has been a member of the Thomas Aquinas College Board of Governors since 1977.

May 15th Alumni Day

The College will hold its first Alumni Day for graduates and former students on Saturday, May 15, 1982. Beginning with Mass at 10:00 A.M., followed by a brunch, the day's program will include a picnic on campus and dinner at 4:00 P.M. Between 6:00 and 8:00 P.M., the alumni will gather to discuss Plato's *Statesman*. For further information, please contact Dean Thomas E. Dillon.

DR. GUSTIN RETURNS TO AQUINAS

Dr. Molly Gustin returned to the College in September after a two-year leave during which she was an associate professor of music at Portland State University in Oregon. There, she taught a course in Greek geometry and its relation to the mathematics of the 17th century in addition to courses in music theory and history. At Thomas Aquinas, she is teaching mathematics, music, and seminar.

In a discussion on a rainy March afternoon, Dr. Gustin said: "I am interested in truth. That is why I like to be at Thomas Aquinas. Teaching and talking help in discovering truth. Everywhere one can talk with students—for the young are usually philosophically inclined—but at Thomas Aquinas you can carry on a dialectic with your colleagues as well."

She offered these insights from her experience of life and teaching: "Once reason is gone, you can't persuade anyone by reason. But you can go on thinking and discovering." "If students get accustomed to memorizing, instead of understanding, they lose the habit of understanding and a kind of despair sets in."

Dr. Gustin is the author of a book on music, entitled *Tonality*, of which one reviewer said: "This profound little book should be studied by every young composer." She received her bachelor's, master's, and doctoral degrees in music at Indiana University and has taught at St. John's College (Annapolis and Santa Fe) and at Park College in Missouri.

CAROL DAY APPOINTED TO FACULTY

Miss Carol A. Day, a doctoral candidate in the history of science at Indiana University, was appointed as a tutor and began teaching at Thomas Aquinas in September. Miss Day received her B.S. degree magna cum laude from Indiana University in astrophysics in 1973. She earned her master's degree in astronomy at the University of Michigan in 1975.

Co-author of articles in *Astrophysical Letters* and *The Astrophysical Journal*, Miss Day has had her research published also in the journal of the American Association of Variable Star Observers. She has taught at the University of Michigan and Indiana University where she was, first, associate instructor in the philosophy of science and, later, in mathematics.

Miss Day has done research on variable stars and the distribution of gas in our galaxy and in solar astronomy. Her most recent work has been study of medieval treatments of the classification of science, namely, the determination of the parts or species of knowledge, the proper subject matter of each science, and the relationship of one science with another. Her dissertation work focuses on John Buridan's 14th-century treatment of the problem.

Commenting on teaching at Thomas Aquinas, Miss Day said: "I am continuing and expanding my knowledge of the classics and my interest in them. What is best, at Thomas Aquinas we do not read the classics as historical curiosities but to find what they have to teach us."

COLLEGE LIFE: STUDENT ACTIVITIES PROGRAM

The student activities program complements the academic program of Thomas Aquinas College by providing the wholesome recreation so conducive to the successful pursuit of a serious and demanding intellectual life. The principal activities the College has sponsored since its conception are four annual dances, two annual picnics, and seasonal volleyball games. Other activities scheduled on a regular basis, or as student interest warrants, include outings to plays, concerts, and museums, Shakespeare and Newman readings, progressive dinners, faculty-student basketball games, a film series, and outdoor recreation in Los Padres National Forest.

While always appreciating the importance of a well-coordinated activities program, the College is careful to subordinate recreational and athletic activities to its educational mission. Such activities are known to be important in the life of the young, especially those who apply themselves at length to serious thought, and the College supports and encourages student activities to the extent that they help young people enthusiastically pursue the life of the mind. Activities at Thomas Aquinas College never become an end in themselves or take on a significance disproportionate to their true significance. The existing Student Activities Program began in 1978 when the College relocated to the Ferndale Ranch. It is coordinated by a student, usually a senior, under the supervision of the Assistant Dean for Student Affairs. The program is funded by the College; no special activities fee is assessed.

The highlights of this year's social activity have been dances and dinners. At the beginning of the year, a Senior-Freshman formal dinner was held for the express purpose of the students meeting one another and discussing the school's aims and the freshmen's expectations. The faculty and administration were invited to attend as well. After dinner, the seniors entertained the freshmen with some musical arrangements and limericks. The seniors wrote the limericks using the unsuspecting freshmen as subjects...this was the extent of any initiation the freshmen had to undergo.

The annual progressive dinners have also been scheduled. On one evening during the school year, each class is invited to several tutors' homes for dinner. Each tutor serves one course of the evening's meal.

At the close of the year, the Junior class gives a formal dinner and dance for the Senior class and on the last day of finals the seniors are honored at the annual "President's Dinner".

The dances held thus far have been the Halloween, Christmas and Mardi Gras dances. The final dance will be the Spring Party in May. These dances are extravaganzas of music, dancing, entertainment, and refreshment planned entirely by the students. Faculty, administration, students, alumni and guests all attend. Dance lessons are given by alumnus Leo Raab to refresh the

Continues on page 4.

CARDINAL MANNING VISITS CAMPUS



His Eminence Timothy Cardinal Manning, Archbishop of Los Angeles, talks with seniors Karen Gallop and Franklin Salazar during his February, 1982, visit to the campus. In September, Cardinal Manning opened the academic year with a Mass in the College chapel.

PUBLIC AFFAIRS DIRECTOR APPOINTED

James E. Twyman was named director of public affairs for Thomas Aquinas College in October, 1981. Mr. Twyman, who brings extensive academic and writing experience to this position, holds responsibility in public relations and information, special events planning, College publications management, and special fund-raising programs.

Mr. Twyman earned his B.A. degree in psychology and his M.A. in cultural anthropology at Northwestern University and did additional graduate work in African studies and anthropology at Northwestern and the University of Minnesota. In Chicago, he taught at St. Xavier College, where he was chairman of the sociology-anthropology department, and at Loyola University.

In 1978, Mr. Twyman was the general manager of the national congress, "What Ever Happened to Religious Life?", in St. Louis for the Institute on Religious Life. He is the author of *Walking Down State Street*, a study of the Archdiocese of Chicago, *The Fork in the Road*, and other analyses of contemporary Church affairs.

JUDITH BOWLES FINANCIAL AIDE

In response to increasingly complex financial management requirements, Mrs. Judith Bowles has been appointed business and financial assistant for Thomas Aquinas. She assumed her full-time responsibilities in October after serving as a consultant to the College since January, 1981.

Mrs. Bowles operates the business office and bookstore, prepares the College financial statements, and maintains accounting and bookkeeping reports and records. She will assist in preparation of the annual budget and in administering personnel, purchasing, insurance, and budget control programs.

Mrs. Bowles attended the Bentley School of Accounting. She has held various corporate accounting and financial positions and operated her own bookkeeping and tax service until she joined the College staff.

ADMISSIONS AIDES SELECTED; '82-'83 APPLICATIONS ACCEPTED THROUGH AUGUST

Regional admissions advisors were appointed in the Chicago, New York City, and Washington, D.C., metropolitan areas this fall to provide readily accessible information about Thomas Aquinas College to prospective students and their families. Working in coordination with Mr. Thomas Susanka, director of admissions and financial aid, are Mary Ellen Milligan (Chicago), Patricia Puccetti (New York City), and William J. Howard, Jr. (Washington, D.C.). All three are graduates of the College.

Serving on a volunteer basis, the advisors provide prospective students with information about the curriculum, goals, admissions and financial aid policies and programs of the College. In conjunction with Mr. Susanka, they can arrange for presentations about Thomas Aquinas College at high schools, parishes, religious organizations, and homes in their areas. Copies of the College *Bulletin of Information* and application materials are available from them.

Addresses and telephone numbers of the advisors are: for Chicago—Miss Mary Ellen Milligan, 1721 Wagner Rd., Glenview, IL 60025, (312) 724-6765; for New York City—Miss Patricia Puccetti, c/o C.U.F., 222 North Avenue, P.O. Box 5, New Rochelle, NY 10801, (914) 235-9408, or (914) 235-4044; for Washington, D.C.—Mr. William J. Howard, Jr., National Legal Center for the Public Interest, 1101 17th St., N.W., Suite 810, Washington, D.C. 20036, (202) 296-1683, or (202) 966-6475.

Thomas Aquinas College will accept student applications for the 1982-83 academic year through August, 1982. All alumni, students, and friends of the College are urged to refer any interested and prospective students for next September to Mr. Susanka, (805) 525-4417, or to one of the regional advisors as soon as possible.

STUDENT ACTIVITIES

Continued from page 3.

returning students and teach freshmen basic waltz, fox trot and swing steps.

Cultural events this year have included a trip to the Dorothy Chandler Pavilion to hear Handel's "Messiah" sung by the Los Angeles Master Chorale, several movies, Shakespeare readings and seminars. The Shakespeare readings are hosted by a member of the faculty in his or her home. A play is chosen and students sign up to read the various parts. A seminar to discuss liberal education as set forth in the "Blue Book" is scheduled for the Spring. Past years' seminar topics have ranged from Tolkien's works to the documents of Vatican II. These events have been complemented by other school-sponsored activities such as lectures, concerts and a Greek tutorial.

The main recreational event is volleyball. Each semester students choose teams which compete throughout the year. At the end of the year, a championship series is played. Soccer is growing in popularity, and a pick-up game often occurs in the late afternoon. All-school softball games on The Hacienda lawn precede the Fall and Spring picnics. This year, the Spring picnic will be the occasion for a reunion of all alumni. Following the barbecue dinner, there will be seminars for the alumni to discuss a work read prior to the day.

Outings have included a five-day ski trip to Mammoth Mountain ski resort during the semester break, a trip to Santa Barbara to go on a whale-watch and visit the mission, a trip to Disneyland and a Dodgers baseball game.

Dr. and Mrs. McArthur have traditionally hosted "Newman Readings" in their home on campus. These readings take place on various Sunday evenings throughout the year. One of Cardinal Newman's sermons is chosen, one student reads it, and a discussion follows. Sometimes other spiritual authors are read. For example, on the Feast of the Immaculate Conception an excerpt from Venerable Mary of Agreda's *City of God* was read. Other spiritual activities such as a yearly consecration of the dormitories to the Sacred Heart of Jesus and a procession for Mary in May are planned by the students and well attended. Devotions such as the daily Rosary and Compline give the students further opportunity to grow in spirituality. Every Sunday evening, the Rosary is said in Latin in The Hacienda chapel.

Continued student participation proves the popularity of all of these activities and makes them enjoyable and memorable occasions. The well-rounded activities program is admirably fulfilling its function in the life of the College.

Katharine Blewett, Student Activities Director,

Michael F. McLean, Assistant Dean for Student Affairs.

FURNITURE SOUGHT

To carry out plans to furnish and equip the Gatehouse and other campus residences, the College urgently needs donations of household furnishings and equipment in good condition. Required are living and dining room furniture, bedroom and kitchen items—everything "from the rugs on the floor to the pictures on the wall."

Please contact Mr. John Blewett, Executive Vice President, to make donation arrangements: (805) 525-4417.



Thomas Aquinas students take a break with the celebrated jumping frogs of Ventura County.

NEW STAFF ASSIGNMENTS

Three new staff members were welcomed to the administration office in recent months. **Linda L. Salka**, administrative assistant, works with public affairs projects and development research, coordinates the student service scholarship program, and assists the registrar's office. A graduate of California State University (Long Beach), she is a former elementary school teacher and reading consultant. **Marjorie L. Siefken**, who attended Mt. San Antonio and Biola colleges, brings more than 13 years' secretarial experience to her position as general office secretary. **Mary E. Waggoner**, who has an extensive general secretarial background in law offices and business firms, is the secretary for fund raising and development. **Lynda J. McLean**, former general office secretary, is now working primarily on student recruitment activities.

YOUR PRAYERS ARE REQUESTED

Please pray for the repose of the souls of: **Conrad W. Baars, M.D.**, of San Antonio, Texas, contributor to the College, who pioneered the integration of Thomistic thought and clinical psychiatry in healing the emotionally and spiritually troubled... **Mr. John P. Coyne**, of Hillsborough, California, contributor to Thomas Aquinas... **Rev. Joseph S. Manning**, founding member of the President's Council and pastor emeritus of St. Philip's parish, San Francisco... **Florence J. Martin**, of Ojai, California, who with her husband, Mr. Edward T. Martin, was a founding member of the President's Council... **Sarah Michael**, of Chantilly, Virginia, grandmother of Martha Michael, Class of 1985... **Lester K. Syren**, of Anchorage, Alaska, father of Therese J. (Class of 1980), Wyn (Class of 1983), Kermit (formerly, Class of 1984), and Lester K. (Class of 1985) Syren.

VARIED PROGRAMS FOR '81-'82 LECTURE SERIES

Rev. Thomas A. McGovern, S.J., tutor at Thomas Aquinas College, opened the 1981-82 Friday night lecture series on September 11 with his presentation, "Logic: Part of Liberal Education", emphasizing that logic provides the reason with the indispensable instruments it needs to arrive with sureness at scientific knowledge.

On October 23, President Ronald P. McArthur spoke on "The Natural Law: A Perennial Problem". He gave this address as the 25th annual lecture of the Natural Law Institute at the University of Notre Dame in March, 1981. His lecture examined the doctrine of natural rights in the Declaration of Independence, the American belief 200 years later that there is neither natural law nor natural rights, and the serious questions these contrasting positions raise.

Erik Ritter von Kuehnelt-Leddihn addressed the College on "Liberty and Equality" on December 4 and Paul Roche, translator of Aeschylus and Sophocles, spoke on the principles of translating poetry on January 15. Mr. Roche stated that at the heart of poetry there is a rhythm and that we are moved by this rhythm and the lilt and music of words more than we suspect. In translating poetry, Mr. Roche said, the spirit and rhythm must be retained as well as the specific sense of the words.

Robert A. Goldwin gave the annual Washington-Lincoln lecture on February 12, speaking on the U.S. Bill of Rights. He noted that coalitions in the U.S. form only temporarily around a single issue because the segments of our society do not uniformly agree on all issues. Hence, political alignments in the U.S. are shifting. He observed that the American political pattern of acting out of one's self interest has proven to be a workable system to date.

Stillman Drake's February 19 lecture on Galileo's *Dialogue Concerning the Two Chief World Systems* stressed that Galileo's work was based on observation and not on philosophical presupposition. Professor Drake emphasized that Galileo's *Dialogue* concerned the explanation of the tides.

Professor Ralph M. McInerney gave the annual St. Thomas Day lecture on March 5, discussing St. Thomas' explanation of God's omnipotence. He explained how language about God is to be understood, stating that man's concepts depend upon sense and therefore we have to be careful when we speak of God not to limit Him because of the limitations of our own intellects.

On September 25, Jacqueline Rosen, flautist, and Terrence Farrell, guitarist, presented a program that included three 19th-century pieces performed on a pre-Civil War era guitar. Pianist Edyth Wagner and violinist Otis Ingelman presented an evening of the works of Mozart, Beethoven, and Grieg on November 6.

Remaining programs are: **April 2: Alberto Coffa**, speaking on the origins of modern symbolic logic; **April 16: a poetry reading by Professor George Tennyson**; **April 30: a concert by the Schola Cantorum**; **May 14: Christopher Burrell**, lecturing on *Plato's Republic*. Copies of Dr. McArthur's lecture, "The Natural Law: A Perennial Problem", are available upon request.