

HISTORY OF THE
DEPARTMENT OF MATHEMATICS

PREPARED BY
ELIZABETH HINES CZOMPO

Elizabeth Hines Czompo
May 5, 1976

HISTORY OF THE DEPARTMENT OF MATHEMATICS
MARSHALL COLLEGE/UNIVERSITY 1869-1976

According to the early catalogs arithmetic, algebra and trigonometry were taught from 1869. In 1876 geometry had been added. From 1896, when the first mention was made of a Department of Mathematics, to 1912 the emphasis was placed on mental arithmetic. This was the period of the "Three R's". At that time the idea of using mathematics for the development of radio or television or of using mathematics to land man on the moon was too fantastic to think about.

Miss Lilian Hackney, who came to Marshall in 1895, was the first Mathematics Department Head. From 1907 to 1940, when she retired, Miss Hackney was Department Head. During this period the emphasis shifted to teacher training, since the professional mathematician had not yet been recognized as vital in our country's growth and progress. Miss Hackney probably saw more changes in Marshall than any other faculty member, and when she retired she was quoted in the Parthenon (May 17, 1940) as saying, "The important thing is to make Marshall the best school of its kind." Mr. Howard B. Lee, a 1905 Marshall graduate who was Attorney General of West Virginia from 1925 to 1933, wrote in September, 1975, "I had all my math to Miss Hackney. She knew her stuff, was a fine teacher, and an elegant lady." Her portrait, painted in 1938 by Professor Marian Vest Fors, is in the James E. Morrow Library. She died in February 1943 at Morgantown where she lived during her retirement.

Miss Anna DeNoon, who had been at Marshall since 1909, became the second Department Head. From 1940 until she retired in 1947 she maintained this position. Miss DeNoon was awarded an Honorary Doctor of Science Degree in 1945 from Marietta College, of which she was an alumna. She was sponsor of Chi Beta Phi Sigma, science and mathematics honorary for girls, from 1934 until they joined Chi Beta Phi in 1940. In September, 1947, the Student Handbook was dedicated to her. It contained a photograph of Miss

DeNoon with the following paragraph:

It is with everlasting gratitude and appreciation that this Freshman Guide and Student Handbook for 1947-1948 is respectfully dedicated to a fine teacher and a great lady, who resigned June 1, 1947, after having given generously 38 years of her life in untiring service and devotion to Marshall College. It is with great pleasure that we make this small tribute to Miss Anna Laura DeNoon.

After her retirement, she lived in South Norwalk, Connecticut. Berfitt Jordan and Elizabeth Czompo, presently faculty members in the Department of Mathematics, were students of Miss DeNoon. She died at the age of 88 on January 26, 1976 in Carolton Hospital, Fairfield, Connecticut after a long illness. Burial was in Spring Hill Cemetary, Huntington, West Virginia on January 29, 1976. The service was conducted by a cousin, The Reverend Henry Hoyt, Episcopal minister of Jacksonville, Florida.

After World War II, the ex-servicemen came to college on the G.I. Bill. In September 1946 every college and university was crowded. Marshall, like all the others, hired additional staff to begin training a group of serious-minded young people. Many men and women were interested in careers which required some mathematics. Before the war, the mathematics major became a teacher, but during the war years opportunities for mathematics majors developed in government and industry. In 1957 Sputnik I, the first non-manned space-craft, was put into orbit by Russian scientists. Our country was awakened to the fact that mathematics should have stronger emphasis in our schools. This brought about increased need for mathematics-teacher training. When areas such as business, political science, sociology, psychology, biological science etc. began applying mathematics to decision-making, the need grew for more courses in statistics and computer science. Research in many areas is now mathematics oriented.

After Miss DeNoon retired, Dr. Barron, who came in 1946, became the Department Head. Dr. Barron was the Department Head from 1947 to 1963. The needs and opportunities for mathematics majors became apparent to Dr. Barron during the school year 1946-

1947. These ideas reflected in the changes in curriculum to include more applications for those in engineering courses, and more abstract courses for teacher-training and for those hoping to continue graduate work. After Dr. Barron retired, he spent one winter in Florida, then became Chairman of the Department of Mathematics at Old Dominion College, Norfolk, Virginia. He died there in 1965.

Dr. Thomas Bauserman who had been in the department since 1955, became the next Chairman. He was the Chairman of the Department from 1963 to February 1, 1971, when he voluntarily gave up the position and returned to fulltime teaching. He is at the present teaching in the department.

In February 1967, the department moved into the newly-built Smith Hall from a wooden building. All offices are located on the seventh floor of Smith Hall. Classrooms are on the fifth floor where the Mathematics Library, Graduate Assistants offices and computing machines are located.

In September 1969, the department was assigned a secretary. This was a big step in the development of the department. At the present time the secretary has student help as government paid students are assigned work on the campus.

From February 1, 1971 until his retirement in May, 1972, Dr. Hunter Hardman was Chairman. He had been here since 1946. On October 23, 1971 Dr. Hardman received an Alumni citation for Excellence in Education from Alderson-Broadus College where he was a student from 1925 to 1929.

Pi Mu Epsilon (Beta Chapter), National Mathematics Honorary, was granted a charter April 24, 1970. The guest speaker for the Installation Dinner on April 24, 1970 was Dr. J. C. Eaves, who was the National President of Pi Mu Epsilon and the Chairman of the Mathematics Department at West Virginia University. Bi-monthly meetings usually have speakers from the departmental staff.

Since 1972 Dr. John W. Hogan, who came to Marshall in 1969, has been the sixth Chairman of the Department of Mathematics.

In 1972 the Department of Mathematics of Marshall University was granted institutional membership in the American Mathematical Society. On December 19, 1974 the Department was granted institutional membership in the Mathematical Association of America.

In 1969 the requirement for mathematics majors was changed from 15 to 18 hours beyond Integral Calculus. In 1972 the requirement became 20 hours of 300 and 400 courses. In 1976 mathematics majors will be required to have 23 hours of 300 and 400 courses.

The Master of Arts Degree with a major in Mathematics was proposed February 1, 1972, and implemented August 31, 1972. In May, 1974, Jerry Farmer became the first student to receive the Masters Degree. In August, 1974, there was one more Masters Degree granted, in May, 1975, there were five, and during the summer, 1975, there were three more. In May, 1976, there probably will be four more, and during the summer, 1976, probably three more.

Under the leadership of Dr. W. Thurmon Whitley, the department organized in the fall of 1972 a speaking program which provided speakers for junior high schools, high schools, colleges, teacher workshops, and civic and professional organizations on topics such as:

- Careers in Mathematics
- Mathematicians are Human
- Introduction of Motions in Geometry by Reflections
- Classical Construction Problems of Antiquity
- Mind Reading and The Binary Numbers
- Digital Computers
- Mathematics of Interest
- Pocket Calculators
- Think Metric
- Pythagorean Triples
- The CARDIAC Computer
- Codes and Matrices
- Cardinal Numbers
- Ordinal Numbers.

The following pages give a detailed account of the growth of the department as taken from the catalogs.

DEVELOPMENT OF THE DEPARTMENT OF MATHEMATICS
MARSHALL COLLEGE/MARSHALL UNIVERSITY 1896-1976

Early records of courses taught at Marshall are found in the available catalogs. Marshall College Catalogs of 1869, 1876, 1893, 1894, and 1895 state separate courses in Mathematics. The idea of a department was not developed until 1896.

Marshall College had become the first State Normal School in West Virginia in 1867, however, no record was found concerning mathematics courses at that time. The Register and Circular for 1869-1870 stated that written Arithmetic was assigned to the Normal Course, which was made up of two years, called the Junior and Senior years. Higher Algebra and Trigonometry were assigned to the higher Normal Course.

Textbooks listed in the 1876-1877 Catalogue are:

Ray's Third Arithmetic
Ray's Higher Arithmetic
Olney's Beginning Algebra
Geometry and Trigonometry were taught but
textbooks were not listed.

From 1893 to 1896 there was a three-year course, consisting of junior year, middle year, and senior year for the normal training. At the same time there was a two-year course for academic training (preparatory for professional courses at a university). The textbooks used in this period were:

Arithmetic - Ray's Higher
Algebra - Milne
Plane Geometry - Hill
Plane Trigonometry - Wentworth
Geometry and Trigonometry - Wells or Stewart-Davies.

Miss Mary McKendree, of Central City (later named Westmoreland) had graduated in 1892 from Marshall. Her teaching experiences were:

1893-1894 Volunteer Assistant
1895-1896 Assistant
1897-1898 Mathematics and Professional Department

1898-1899	Mathematics and Economics
1899-1900	Mathematics, Economics, and Training
1900-1901	Mathematics, Economics and Training Work
1901-1902	Mathematics.

She resigned in favor of a better position, that of becoming the wife of one of West Virginia's most promising young lawyers.

The Marshall Model School, later named Jenkins Laboratory School, opened for teacher training in 1896. The Normal Course became a four year course; the Academic Course became a three year course.

The first mention of a Department of Mathematics is found in the Marshall College State Normal School Catalog for 1896-1897. However, no Department Head was named in the Catalogs until 1907 when Miss Lilian Hackney was named Department Head.

The catalog of 1901-1902 states that "Miss Lilian Hackney, a native of Morgantown, was educated in the graded schools of her home town, at the Ohio Wesleyan, and at the University of West Virginia where she took her degree in 1893. She taught in the schools of her native county, in the city of Cleveland, Ohio, and has held her present position since March, 1895." She was hired as Assistant.

The catalogs list Miss Hackney's teaching experiences and training as follows:

1896-1897	Assistant
1897-1898	Language and Natural Sciences
1898-1899	Latin and Natural Sciences
1899-1900	Began teaching a course in Physics
1900-1901	Botany and Latin
	This catalog states that Miss Hackney was also on the Standing Committee for Graduation and was in charge of all matters pertaining to rooms, furniture, room-rent, and was advisory and supervisory member of the faculty in all things relating to the food.
1901-1907	Teaching Mathematics
1907-1908	Here Miss Hackney was named as Department Head of Mathematics
1908-1909	Mathematics
	Cornell University and Columbia University were added to her training.

1919	Catalog added University of Marburg, Germany
1921, 24, 26	Miss Hackney taught in the summer of these years at the University of Chicago
1925	Catalog listed Miss Hackney as "Associate Professor of Mathematics; Head of Department"
1936	Catalog listed her as Professor of Mathematics
1940	Retired
1941	Catalog listed her as "Professor of Mathematics, Emeritus" After retirement, she returned to Morgantown where she died in February, 1943.

Miss Cora Trice was another one of the early teachers. Her experiences were:

1896-1897	Assistant
1897-1898	Civics, English, and Mathematics
1898-1899	Civics, English, and Latin
1899-1900	Catalog has her picture. She died October 1, 1899. She was not a very strong woman and when she was thrown from her buggy, she never recovered.

Mr. Hugh M. Simms, educated in the high school of Charleston, graduated from Marshall College June, 1898. During the spring term of 1898 while he was a senior, he taught Mathematics.

1898-1899	Student at the State University
1899-1900	Civics, English and Mathematics
1900-1901	Civics, English and Mathematics
1901-1902	Civics and History
June, 1902	Resigned to enter the profession of law.

From 1896-1912 Mental Arithmetic was stressed by the Department of Mathematics. We find in the 1896-1897 catalog under the heading "Department of Mathematics:"

All the work in Mathematics is to be supplemented with special and frequent drills and tests in problems involving the more important principles. Notwithstanding the fact that more time is spent in the public schools on English and Arithmetic than on all other subjects combined --- we sincerely believe that as far as successful teaching is concerned, English is the most poorly taught subject, and Arithmetic next. That children

are taught to "solve problems" we shall not question; but we hazard the somewhat radical statement that "solving problems" is the summum totum of the work usually accomplished not only in the public schools, but in all schools, with the rarest exceptions, and our own individual work in this line in past years not among the exceptions; again, we insist that more time is lost in the study of arithmetic than in all other studies combined; the cultural, the intellectual, the scientific value of study is almost lost sight of in this branch of work, all being sacrificed to the one mechanical thing --- "solving problems". This institution aims to so teach the students and so train the teachers that this common fault may be remedied and accordingly, more than one-third of the time usually spent in the study of arithmetic, saved for other equally important work. Instead of spending weeks on mensuration of solids, and a few kindred subjects, this work is referred, after brief, practical exercises, to its proper place, Geometry.

Mental Arithmetic is emphasized as of chief importance in the study of arithmetic in general. In the 1897-1898 catalog we find:

Owing to the distribution of the branches of this group over the entire four years of the course in equal proportions per year, it affords better opportunity for systematic work than any other subject in the curriculum, it being possible to make the subject the special assignment of one teacher without any possibility of conflict in recitations save in cases of divisions of the class in the work of any one year. Solving problems and demonstrating theorems are encouraged only as a means to an end, and not, as seems well nigh universally the case in our public schools, an end in and of themselves. Mental training and not mechanical skill is kept constantly in view, all forms of perfunctory "sum doing" being discouraged because of comparative loss of time.

Courses and textbooks used were:

Arithmetic (Written) - Milne
 Arithmetic (Mental) - Brooks
 Algebra - Milne
 Geometry (Plane and Solid) - Stewart.

In the 1898-1899 catalog we find:

In mental arithmetic the student is shown the relations of numbers and trained in methods of analysis and accurate logical expression. Algebra is presented by means of text work, recitations, and examinations.

The courses and textbooks were:

Algebra - Milne
 Arithmetic (Mental) - Brooks
 Geometry (Plane) - Stewart
 Geometry (Solid) - Stewart
 Trigonometry (1899-1903) - Crockett
 Trigonometry (1903-1907) - Wentworth.

In the catalogs for 1902-1903, 1903-1904 and 1904-1905 we find:

WRITTEN ARITHMETIC - The regular work in this subject covers a period of one year. It is not made simply a "problem solving" and "answer-getting" process, but a careful study of the principles of arithmetic and of their application to practical problems gathered from various sources, independent of set rules. Rapid work in writing numbers, in addition, subtraction, multiplication, division, especially short division, short methods of calculation in all rules of arithmetic, and plenty of original work, these are the features emphasized in connection with the study of arithmetical principles.

A SERIOUS MISTAKE - Very many who come here have been led into that very unfortunate blunder, so common in several parts of this state, namely, the study of some HIGHER ARITHMETIC. Properly taught and properly studied RAY'S THIRD ARITHMETIC or any equally good book, is all the written arithmetic any school should have in its course. A book like this mastered, and a good MENTAL ARITHMETIC mastered, all the time spent on more advanced texts is virtually lost.

MENTAL ARITHMETIC - This is ARITHMETIC. It would be a blessing to the state of West Virginia if written arithmetic were forbidden to be used in our schools until the pupils had reached the age of 15, and had somewhat thoroughly mastered a good text in mental arithmetic.

Year after year this school placed greater emphasis upon mental arithmetic. And we shall emphasize it still more, till those who come to us learn its value and carry a proper estimate of it back to their home schools.

No student will be permitted to graduate who has not thoroughly studied BROOKS' MENTAL or an equally good book.

No one is permitted to study Algebra who has not completed advanced mental arithmetic.

The 1902-1903 catalog stated that bookkeeping which was usually listed under mathematics, was made compulsory for both normal and academic courses. It remained compulsory through 1909.

M. M. Scott served 4 years as Instructor in the Glenville State Normal School before his election as Professor of Mathematics at Marshall College. He took his A.B. and A.M. degrees at Bethany, West Virginia. He taught mathematics one year then resigned at the close of the winter term of 1902-1903 to accept a lucrative business position in St. Louis and was succeeded by Dr. J. I. Harvey, formerly Professor of Modern Languages in the state university.

Miss Orr, a graduate from the West Liberty State Normal School took her L.I. and her A.B. degrees from the National Normal University of Tennessee. She taught mathematics 1902-1903.

Mr. Fitzgerald is one of the youngest graduates ever sent from Marshall College. He graduated in 1897 and spent the year doing graduate work here. He then entered Georgetown University in Kentucky from which he graduated A.B. in 1901. He then spent a year teaching as principal of the Hurricane schools. From 1902-1907 he taught mathematics.

Mr. R. J. Largent was educated in the common schools of West Virginia and at the University of West Virginia where he took his degree. In January of 1904, he began teaching mathematics and history. Later he taught only history until he retired in 1942.

The 1905-1906 catalog states:

Mental Arithmetic is arithmetic, and we emphasize its importance as being of the very highest order.

Miss Mabel Brown taught history and mathematics in 1904-1905. She resigned to continue her studies.

Mrs. Frances Caldwell was educated in West Virginia and Kentucky. She taught in Charleston city schools and in the Concord Branch of the State Normal. She taught mathematics at Marshall College in 1905-1906.

In the 1906-1907 catalog we find:

Arithmetic - The number work of the first year is largely objective, that of the second and third years includes practice in the fundamental rules, the multiplication table, the tables of weights and measures and problems especially designed to cultivate thought power. It is believed that mental exercises cannot be introduced too early. The subject of weights and measures is concretely presented by means of a full cabinet, containing measures and scales, so that the pupils can actually test the tables for themselves. Every good device known is available for the number work and by this means it is prevented from becoming monotonous and tedious.

Analytic geometry was added in the 1906-1907 catalog.

In the catalog of 1907-1908 under the Department of Mathematics, Miss Lillian Hackney was listed as Department Head, as already stated. The following was written under Arithmetic:

Arithmetic - Belfield & Brooks Rational Arithmetic is used during the first years by the teacher, but this book furnishes only a basis for supplementary exercises taken from the newest and best texts of the day. It is followed by Ray's Elementary Arithmetic, and this by Milne's Standard Arithmetic in the upper grades. Daily Drill in mental arithmetic is continued throughout the course.

According to the 1907-1908 catalog, the textbooks by Wentworth were:

Trigonometry (2 terms - Plane and Spherical)
Algebra
Analytic Geometry

In the catalog of 1908-1909, arithmetic still occupied an important place in the courses:

Mental arithmetic used books by Dubb and Brook

Arithmetic used Milne's Standard Arithmetic book

Martha J. Hughes, A.B. from Wellesley College, taught mathematics from 1907-1909.

Elizabeth Colwell, educated at Dennison University, Vassar and Radcliffe, taught mathematics from 1909-1910 and 1912 to 1913.

W. R. Thacker received his A.B. in English and mathematics from West Virginia University. He taught mathematics from 1909 to 1911.

Anna Laura DeNoon of Connecticut received her A.B. from Marietta College, her M.A. in 1930 from Columbia University, and was awarded an Honorary D.Sc. in 1945 from Marietta. Her experience was listed as follows:

1909-1910 Mathematics
1910-1911 Assistant for Preparatory School
1911-1947 Mathematics
1930 Catalog listed her as Associate Professor
1939 Catalog listed her as Professor
1940 She was named Department Head
1947 She retired. She died January 26, 1976.

Textbooks from 1908-1912:

Algebra - Milne
Geometry - Milne
Plane and Spherical Trigonometry - Wells
University Algebra - Wells
Analytic Geometry - Nichol.

Ellen E. Pottberg graduated from Bryn Mawr College with an A.B. degree. She taught mathematics from 1913 to 1914.

Louise Watson, also from Bryn Mawr College, graduated with an A.B. and taught mathematics from 1913 to 1914.

In the 1912 catalog we find that classes were offered for teachers to do review work. Included in this were two mathematics courses:

Written Arithmetic - any good book - 10 weeks
Mental Arithmetic - Brooks - 10 weeks.

In addition to the algebra, geometry, trigonometry and analytic geometry, an elective course in mathematics was added.

Mental arithmetic was not mentioned again. From 1913-1919, the other courses remained unchanged. However, no mention of textbooks was made.

The 1916 catalog included the following statement under mathematics:

These courses can be taken with entire confidence by the students who desire to complete the college course in other institutions.

Mr. B. B. Chambers, Marshall College, 1901 and Dennison University, A.B. was in the Mathematics Department as follows:

1915-1916 Mathematics
1916-1917 Athletic Director and Assistant in Mathematics.

Mr. Archer E. Reilly, Ohio State University, A.B. was listed as athletic director and mathematics teacher for 1919-1920.

The 1919 catalog stated that Marshall was in the process of changing to a college. This catalog contains the following:

**"THE FIRST THREE YEARS OF A COURSE
FOR TRAINING HIGH SCHOOL TEACHERS"**

This is a course for the preparation of teachers for high schools and junior high schools. The conditions for entrance are the same as for the Two-Year Course for Elementary Teachers. The work is planned to prepare the student to teach two or three subjects. With this object in mind, it is

expected that, in addition to the required work in the professional subjects, the student will select some one subject, called the major, for which he wishes to prepare especially, and two others, known as minors, which are most commonly grouped with the subject in which he will do the major part of his work.

For example, he may select History as his major subject, and English and Literature as his minor subjects; or he may choose Mathematics as his major and some two Sciences as the two minors; or Foreign Languages as the major and any two related subjects as minors.

This expansion is the result of an order passed by the Board of Regents at its meeting the twenty-fourth of January, 1919. Its action was based on the opinion that the educational needs of the State now justify the orderly development of Marshall College into a Teachers College, and call for the immediate addition of a third year to the course of study. Accordingly, the school is now entering a new and larger sphere of usefulness to the State in the preparation of teachers for all grades of public schools up to and including junior high schools and high schools.

To meet this need, courses were offered covering three years of college work. The program was modeled after the requirements of the first three years of the best teachers' colleges in the country, with such alterations as seem to fit the best needs of our state.

The courses added in 1919 were Differential Calculus (four hours) and Integral Calculus (four hours). In 1920 a course in Differential Equations (four hours) was added; in 1952 the name was changed to Ordinary Differential Equations, and the course is still being taught. Also, a course in Teaching Secondary Mathematics (four hours) was added. The prerequisite was eight hours of college mathematics. (This was later changed to twelve hours and in 1929 was made an Education course.) The course presented methods of teaching algebra and geometry.

Virginia Cavendish, Marshall College and University of Michigan, A.B., was assistant in English and mathematics in 1920.

When the A.B. degree in education was announced to begin 1920-1921, it was stated in the catalog that in order to become a mathematics teacher 20 to 40 hours in mathematics was required. (The second year of College Physics counted as mathematics.)

From 1921 to 1949 a course in the History of Mathematics was taught (three hours credit for a few years, then reduced to two hours credit). The prerequisite was first eight hours of college mathematics, later changed to twelve hours of college mathematics. In 1949 this course was dropped and a course added taking its place called Fundamental Concepts and History of Mathematics (three hours credit). Later the name was changed to Fundamental Concepts of Modern Algebra.

From 1922 to 1960 a course in Theory of Equations was taught (four hours credit, later three hours credit). The prerequisite was, first, Analytic Geometry, later two three-hour courses and finally four three-hour courses.

From 1923 to 1930 a course in Theory of Numbers (three hours credit) was taught. The prerequisite was Theory of Equations.

From 1923 to 1925 a course in Series (two hours credit) was taught with prerequisite Integral Calculus.

Marshall College was primarily a teachers' college until the College of Arts and Sciences was established with departments in pre-medical, pre-engineering and pre-law. In 1924-1925 under the newly formed College of Arts and Sciences, the natural sciences and mathematics were placed in one group. For a major 48 hours was required from one group.

The 1925 catalog listed trigonometry and college algebra as four hour courses except for engineering students who took three hour courses in these subjects.

The development of Applied Mathematics courses began under the Department of Mathematics as early as 1926 when the following courses were added: Plane Surveying, Advanced Surveying, Differential Calculus (three hours for engineering students) and Integral Calculus (three hours for engineering students). The name

"Applied Mathematics" did not appear until 1929 when other applied mathematics courses were added. These courses grew into a Department of Engineering in 1938.

From 1928 to 1930 a course was taught in Business Administration and Arithmetic (two hours credit). This course was required for teachers of arithmetic.

Arthur Taylor Bragonier, from West Virginia University, B.S.C. and University of Michigan, M.S. was listed:

1928 Associate Professor of Physics
1929-1936 Associate Professor of Applied Mathematics

He died in 1936. His wife, Dorothy, later taught mathematics.

Miss Margaret Virginia Foulk, West Virginia University A.B.; Teachers College, Columbia University, A.M.; and Diploma, Director of Rural Education, and was instructor in mathematics 1928-1929. In 1929 she was appointed Assistant Professor of Education, remaining in Education until she retired.

Hugh Eugene Stelson, Kansas Wesleyan University, A.B.; Northwestern University, M.A.; University of Iowa, Ph.D., was Associate Professor of Mathematics from 1929 to 1930, when he went to Kent State University. In recent years he has been a Professor at Michigan State University.

Richard Payne Bruns, who had attended Marshall College and received C.E. from Rensselaer Polytechnic Institute taught mathematics in 1930 to 1931.

Glenn Frank Allen of West Virginia University, B.S.C.E. was listed as Instructor in Applied Mathematics for the first semester of 1931-1932.

Elmo Austin Murray, Jr., Carnegie Institute of Technology, B.S. in E.E. was listed as follows:

1931-1932 Instructor in Applied Mathematics
(2nd semester)
1932-1933 Instructor in Applied Mathematics.

In 1930 a three-hour course in Solid Analytic Geometry was begun and was offered until 1967.

Walter Marshall Dove, Marshall College, A.B.; University of Michigan; Pennsylvania State College, was listed as follows:

1931-1932	Instructor in Physics
1932-1937	Assistant Professor of Physics and Mathematics
1937-1938	On leave
1938-1940	Assistant Professor of Physics and Mathematics
1940-1941	Associate Professor of Physics and Mathematics
1941-1944	Associate Professor of Mathematics
1944-1946	On leave U.S. Naval Reserve

He resigned September 1, 1946, to go to New York University. He is now living in Washington, D.C.

In November, 1931, the Parthenon had a story on "Snapshots of the Curriculum." The following was reported:

The Mathematics department under the supervision of Miss Hackney and Miss DeNoon offers Solid and Plane Geometry, College Algebra, Analytical Geometry and Calculus.

Miss DeNoon has charge of Calculus and Geometry, while Miss Hackney earns her salary by teaching the remaining ones.

No mathematics courses are required for graduation, so that the large number of students who are enrolled in this department are there because of the pure fascination to be found in figures.

Ambrose E. McCaskey of W.V.U., M.S.C.E., 1936. He began his career at Marshall University as Instructor in Applied Mathematics and transferred to the Engineering Department in 1938.

Thomas Davis, Ph.D. 1935 from University of Virginia was Instructor in Physics and Mathematics from 1937-1938.

Livingston Hunter Chambers, a Marshall student, A.B. and M.A., W.V.U.; Ph.D. 1935, Cornell University, began teaching mathematics at Marshall in 1940 with the rank of Associate Professor of Mathematics. (In 1933 he was the co-author of a trigonometry text with Dr. Hannibal Davis, W.V.U.) He remained here until 1943 when he went on leave with the U.S. Naval Reserve. He returned in 1945, then resigned April 16, 1946. He then went to the U.S. Naval Academy as Professor of Mathematics. He died in Annapolis May 2, 1975.

In 1941, a course in Advanced Calculus (three hours credit) was added. The prerequisite was Integral Calculus. A continuation of this course (three hours credit) was added in 1947.

Frances Talbott Grimm, A.B. 1928, W.V.U.; graduate student 1942, Marshall College, was listed as Instructor in Geography and Mathematics for 1943-1944.

Wilbur Judson Robinson, Ph.D. 1934, Ohio State University, was listed as Assistant Professor of Mathematics for 1942-1943, when he went to teach at Centre College.

Mary Elizabeth Williams, M.A. 1936, University of Kentucky; graduate student in mathematics 1938, 1940 University of Kentucky, was listed as follows:

1942-1945 Instructor in mathematics supplying
for instructor on leave
1945-1946 Assistant Professor in Mathematics.

She resigned September 1, 1946. Later she became a professor at Skidmore College, Saratoga Springs, New York.

L. Vernon Robinson, Ph.D. 1930, Harvard University, was listed as follows:

1944-1945 Assistant Professor of Physics
and Mathematics

He left Marshall to teach at Emory University.

Mary Alice Goins, M.A. 1933, University of Michigan; graduate student in mathematics 1934, 1935 Cleary College; 1937 Bowling Green Business University; 1941 Strayer College; 1942 University of Chicago; 1949 University of Kentucky, 1960 University of South Carolina, was listed as follows:

1946-1953 Assistant Professor of Mathematics
1953-1969 Associate Professor of Mathematics
1969 Retired

She is living in Mississippi and North Carolina.

Dorothy Berry Bragonier, widow of Arthur Bragonier, M.A. 1939 Columbia University, was transferred from the Laboratory School February 1, 1947 with the rank of Assistant Professor of Mathematics. She retired May 25, 1958. At the present time she is living in Alexandria, Virginia.

Grover Preston Burns, M.S. 1941, W.V.U., came to Marshall in 1946 as Associate Professor of Mathematics. He left in 1948.

Leonard B. Welty, M.A. 1941, Marshall College, became Instructor in Mathematics September 23, 1946. He left Marshall in 1948.

Frank Dudley White, M.Ed. 1939, Duke University; graduate student 1947-1948 University of Kentucky became Instructor in Mathematics September 1, 1946. He was here until 1953 when he left for Radford, Virginia.

Louise Knifley, M.A. 1947, University of Kentucky; graduate student University of North Carolina, University of Colorado, became Instructor in Mathematics September 1, 1947. She remained here until 1950. At the present she is teaching at Martin, Tennessee in a branch of the University of Tennessee.

Rufus L. Land, B.S. 1926, U.S. Military Academy; graduate student 1946-1947, Marshall College, became Instructor in Mathematics in 1947, and remained here until 1948. Later he taught in the Economics Department.

John K. Sterrett, M.A. 1937, Kansas University; 1943 Princeton University; 1944 Massachusetts Institute of Technology, was appointed Associate Professor of Mathematics August 13, 1947. He stayed until 1950. Following is a list of positions he held after leaving Marshall in 1950. In addition to these he taught on the side for the University of Maryland, University of Delaware and Florida University. Also, he received the Ph.D. Degree in Mathematics at the University of Pittsburgh.

1950-1952	Data Reduction Chief, Computation Laboratory, Ballistics Research Laboratory, Aberdeen, Maryland
1952-1954	Operations Research Specialist, Systems Division, Naval Research Laboratory, Washington, D.C.
1954-1955	Director of Ballistics, Air Force Armament Center, Elgin Air Force Base, Florida
1955-1957	Group Leader, Special Problems Operations Research Division, Office of Naval Research, Washington, D.C.

- 1957-1959 Chief Mathematician, Office of Quartermaster General, U.S. Army, Washington, D.C.
- 1959-1961 Staff Scientist, Computers and Celestial Mechanics, National Aeronautics & Space Administration Headquarters, Washington, D.C.
- 1961-1973 Scientific Advisor, Communications and Electronics, North American Air Defense Command Headquarters, Colorado Springs, Colorado

Since retirement from Civil Service in July 1973, Dr. Sterett has served as consultant to the following:

- Georgia Institute of Technology (Post-doctoral Program)
 Kappa Systems (Computer Simulation)
 Agbabian Associates (Nuclear Effects Survivability)
 Systems Control Incorporated (Space Object Identification)

For sometime Dr. Sterrett had an office at the Air Force Academy where he worked on research topics.

Juanita McVey Stanley, A.B. 1929, Marshall College, was Instructor in Mathematics for 1944-1945.

Bernice F. Wright, M.A. 1929, University of Michigan; University of Washington was listed as follows:

- 1946-1951 Instructor in Mathematics
 1952-1957 Assistant Professor in Mathematics
 1958-1969 Associate Professor in Mathematics
 1970-1972 Associate Professor of Education
 1972 Retired.

James Carl Leake, M.A. in Ed., 1938, University of Kentucky, became Acting Instructor in Mathematics in February, 1946. He remained only one semester.

Virginia Pfeiffer Lynch, A.B. Seton Hill College, also became Acting Instructor in Mathematics in February, 1946. Later she had graduate study at Pennsylvania State College and University of Kentucky. She was listed again in 1954 as Instructor in Mathematics. Later she taught at Gallipolis High School, Gallipolis, Ohio.

James J. Barron, Ph.D. 1934, University of Wisconsin; post-graduate study 1942-1943, Yale University; 1944-1945 Brown University, came to Marshall September 1, 1946, with the rank of Professor of Mathematics. In 1947, he became Chairman of the Mathematics Department. In 1963 he retired.

Hunter Hardman, M.A. 1940, University of Chicago; Ph.D. 1963, University of Pittsburgh; was listed as follows:

1946-1947	Instructor in Mathematics
1948-1949	On leave
1952-1956	Assistant Professor of Mathematics
1956-1963	Associate Professor of Mathematics
1963-1972	Professor of Mathematics

Dr. Hardman became Chairman of the Department of Mathematics in February 1971 and retired in May, 1972. He lives in Huntington.

Robert Gutzwiller, A.B. 1942, Marshall College; M.A. 1947, Marshall College; graduate student 1948, 1949 University of Kentucky was Instructor in Mathematics from 1947 to 1949.

From 1947 as the enrollment grew, the staff was increased. Several part-time teachers were appointed for brief periods. These are not listed here.

The following courses were added in 1947:

- (a) Advanced Calculus (second course) for three hours credit.
- (b) Vector Analysis for three hours credit with prerequisite of Calculus. This course was dropped in 1974 when Special Topics were added.
- (c) Partial Differential Equations for three hours credit with prerequisite of Differential Equations. This course was dropped in 1974.

In 1948 the following courses were added:

- (a) An algebra course providing a review of high school algebra. (This course met five days a week for no credit. The course was dropped in 1964.)
- (b) A three hour course on Selected Topics in Mathematics. (In 1949 the course was named Introduction to College Mathematics. This is still taught as the three hour Arts and Sciences requirement.)
- (c) A three hour course in College Geometry with a prerequisite of trigonometry. This course did not appear in 1958 catalog

- (d) A second three hour course or continuation in Theory of Equations.
- (e) A three hour course in Statistics with a prerequisite of Differential Calculus.
- (f) Selected topics in Calculus.
- (g) Introduction to the Theory of Statistics.

In 1949 Plane Geometry was added. The class met five days a week for no credit. This course was a complete review of high school geometry. It was taught until 1966.

Also in 1949 a continuation of Introduction to College Mathematics (three hours) was added. This course was dropped in 1952.

In 1950 the 400 Mathematics courses were listed as "Undergraduate Courses open to Graduate Students". At this time Dr. Barron was listed under Graduate Faculty. By 1952 Miss Goins and Dr. Hardman were also listed in the Graduate Catalog.

In 1952 an integrated course comprised of algebra, trigonometry, analytic geometry and introductory calculus was added. It was designed for engineering students as well as majors and minors in mathematics, physics and chemistry. The course ran for two semesters (five hours credit for each semester). Prerequisite was satisfactory attainment on a placement examination which was made up and administered by the Department of Mathematics. This was dropped in 1970 when Differential and Integral Calculus (four hours each) were also dropped. A new series was added:

College Algebra (3 hrs.) Prerequisite: Placement test or Intermediate Algebra.

Calculus with Analytic Geometry I (5 hrs.) Prerequisite: Placement test and at least 1-1/2 units of Algebra and 1/2 unit of Trigonometry.

Calculus with Analytic Geometry II (4 hrs.)

Calculus with Analytic Geometry III (4 hrs.)

Also added in 1952 were:

- (a) Elementary Statistical Analysis, a three hour course, with prerequisite of College Algebra.
- (b) A three hour course in Functions of a Complex Variable with prerequisite of Integral Calculus.

At this time (1952) the requirements of mathematics majors in the College of Arts and Sciences was changed from 12 hours beyond Integral Calculus to 15 hours beyond Integral Calculus.

Howard W. Baeumler, M.A. 1950, University of Buffalo, was appointed Assistant Professor of Mathematics in 1954. He remained here for two years leaving Marshall in order to study at Ohio State University where he earned a Ph.D. in computer science. He went to Old Dominion College at Norfolk, Virginia.

In 1954 a three hour course in Higher Algebra was added. Prerequisite was junior, senior or graduate standing. This course was dropped in 1958.

Thomas Bauserman, M.A. 1947, Washington State University, Ph.D. 1961, University of Pittsburgh, came to Marshall in 1955, after being instructor in mathematics at West Virginia University. He is listed as follows:

1955-1959	Assistant Professor of Mathematics
1959-1961	Associate Professor of Mathematics
1961-1963	Professor of Mathematics
1963-1971	Chairman of the Department of Mathematics
1971-	Professor of Mathematics.

Dr. Bauserman was on leave 1962-1963 to teach Institutes for Secondary Teachers of Mathematics sponsored by West Virginia University and the National Science Foundation. The classes were held in four centers in West Virginia. He was awarded a Faculty Fellowship by the National Science Foundation in 1960-1961 to attend graduate school at the University of Pittsburgh. At the present he is still teaching in the department.

Cova Anna Elkin, M.A. 1952, University of Kentucky, became Instructor in Mathematics in 1955. She stayed at Marshall until 1958 when she went to Bay City, Michigan to teach in Alma College.

Layton O. Thompson, M.Sc. 1955, West Virginia University, was appointed in 1955.

1955-1958	Instructor in Mathematics
1958-1967	Assistant Professor in Mathematics

1967-1976 Associate Professor in Mathematics
 May, 1976 Retiring.

Mary Martin Ballard, A.B. 1955, Marshall College, was Instructor in Mathematics from 1956-1959 when she went to Atlanta, Georgia as her husband's work was changed.

Ourania Grambos Forbes, M.A. 1955, Marshall College, was listed as follows:

1952-1957 Instructor in Education
 1957-1959 Assistant Professor of Education
 1959-1960 Assistant Professor of Mathematics.

She married Dr. Jack E. Forbes of Ball State University who was working on a Ball State Modern Math Program.

Leon A. Sears, M.A. 1925, University of Michigan, was appointed Assistant Professor of Mathematics in 1958. He retired in 1965 and died in 1967. His widow, Sylvia, became the first secretary for the Department of Mathematics in 1969. At this writing she is still with the department.

Elizabeth Hines Czompo. M.A. 1939, University of Kentucky; graduate student, Purdue University, University of Kentucky, and Marshall University, was appointed Instructor in Mathematics 1958.

1960-1976 Assistant Professor in Mathematics
 May, 1976 Retiring.

She is a participant in the Speaking Program of the department with special interest in metrification.

Eleanor L. Carte, B.S. 1959, Anderson College, was Instructor in Mathematics from 1960 to 1962. She married Lee Byrnes and is teaching in Central High School, Pontiac, Michigan.

Benjamin F. Plybon, M.S. 1959, Carnegie Institute of Technology, graduate study at Ohio State University, was Instructor in Mathematics from 1959-1965. He received a doctorate degree from Ohio State University, and is presently Associate Professor of Mathematics at Miami University, Oxford, Ohio.

In 1960 three courses were added:

- (a) A modern approach to Elementary Mathematics (three hours credit). This course was designed for in-

service training of high school mathematics teachers.

- (b) Numerical Analysis (three hours credit).
- (c) Fundamental Concepts of Modern Algebra (three hours credit), as previously mentioned on page fifteen.

Berfitt Jordan, A.B. Marshall, 1936; M.A. Marshall, 1947; graduate study, Marshall University, Cornell University, West Virginia University, Colorado University and Oberlin College, was appointed Assistant Professor of Mathematics in 1960.

1960-1967 Assistant Professor in Mathematics
1967- Associate Professor in Mathematics.

At the present time he is still teaching in the department.

Steven Hunter Hatfield, B.S. 1962, VPI; M.S. 1963, West Virginia University, became Instructor in Mathematics in 1963.

1963-1967 Instructor in Mathematics
1967-1975 Assistant Professor in Mathematics
December, 1974 Ed.D., West Virginia University
1975- Associate Professor in Mathematics.

At the present he is teaching in the department. He is Vice President for Colleges and Editor of the Newsletter for the West Virginia Council of Teachers of Mathematics. He is a participant in the Speaking Program of the department.

Albert Luther Hess, M.S. 1962, West Virginia University; was Instructor in Mathematics from 1962 to 1964,

Alice Lindsey, M.A. 1955, East Tennessee State College, was Instructor in Mathematics from 1964 to 1967. She went to Greenville, South Carolina when her husband's work was changed.

Robert Cantees, B.A. 1957, Marshall; M.A. 1961, Marshall, was Instructor in Mathematics in the Williamson and Logan Branches of Marshall University from 1965-1971 when they became Community Colleges. He is presently Chairman of the Department of Mathematics at the Southern West Virginia Community College at Williamson.

Wood C. Sisarcick, B.A. 1963, West Virginia University; M.A. 1965, West Virginia University, was appointed Instructor in Math-

ematics, September, 1965. He is listed as follows:

1965-1968	Instructor in Mathematics
1968-1969	Assistant Professor in Mathematics
1971	Received Ph.D. from University of Kentucky
1971-1973	Assistant Professor in Mathematics
1973	Associate Professor in Mathematics

At present he is teaching in the department. He is Associate Editor of Proceedings of the West Virginia Academy of Sciences. During the summers of 1972, 1973, 1974 he received summer grants from Marshall University Research Board. His current interest is in Actuarial Mathematics.

In 1966 Solid Geometry, which had been taught since 1896, was dropped.

James R. Keller, B.S. 1958, Marshall was appointed Instructor in Mathematics in 1966. He is listed as follows:

1966-1971	Instructor in Mathematics
1967	M.S.T., University of Arizona
1971-	Assistant Professor in Mathematics
1976	Ed.D., West Virginia University.

During the summer of 1974 he received a grant from Marshall University Research Board. At the present he is teaching in the department.

Charles V. Peele, B.S. 1959, North Carolina State University, Master of Applied Mathematics 1963, North Carolina State University was appointed Instructor in Mathematics in 1967.

1967-1969	Instructor in Mathematics
1969-	Assistant Professor in Mathematics
1971	Ph.D. University of Cincinnati.

Presently he is teaching in the department, and is a participant in the Speaking Program of the department.

Photios Photiades, M.S. 1968, Ohio University, was appointed Instructor in Mathematics in 1968. He left in the spring of 1973 to work in industry.

John Fraser, a Marshall graduate, was Assistant Instructor from 1965 to 1969. From 1969-1970, he was a Teaching Assistant. He left Marshall to attend West Virginia University Graduate School.

Sanet Kumer Basu, a native of Calcutta, India, came to Marshall in September, 1968. Dr. Basu received his undergraduate degree from Asutosh College, Calcutta. He received a Master's Degree (Pure Mathematics) from Calcutta University in 1934. He received a fellowship from the Indian government to attend the University of London where he received the Ph.D. degree with high honors in 1947. He died suddenly on October 19, 1968 at the age of 56. Dr. Basu had published many papers in both this country and abroad. His wife and daughter, who was a Marshall freshman, returned to India. The department lost a very fine scholar.

James G. Dobbins, Ph.D. 1969, University of Kentucky, was appointed Assistant Professor of Mathematics in 1969. He left in the spring of 1970 to teach at Wheaton College.

John W. Hogan, B.A. 1957, Berea College; M.S. 1959, University of Wisconsin; Ph.D. 1969, Virginia Polytechnic Institute and State University, was appointed Associate Professor in Mathematics in 1969.

1969-1972 Associate Professor in Mathematics
1972- Professor in Mathematics

During the summers of 1970-1971 he received grants from Marshall University Research Board. Since 1972 he has been Chairman of the Department of Mathematics. He is a reviewer for Mathematical Reviews, and a participant in the Speaking Program of the department.

In 1969 the requirement for mathematics majors in the College of Arts and Sciences was increased from 15 hours to 18 hours beyond integral calculus. May 28, 1969 a course on Elementary Topology (three hours) was approved.

Reading for Honors in Mathematics (495H, 2-4 hours and 496H, 2-4 hours) was approved April 1, 1970.

W. Thurmon Whitley, B.S. 1963, Stetson University; M.A. 1966, University of North Carolina; Ph.D. 1969, Virginia Polytechnic Institute and State University, was appointed Assistant Professor of Mathematics in 1970.

1970-1973 Assistant Professor of Mathematics
1973- Associate Professor of Mathematics.

During the summer of 1971, he received a grant from the Marshall University Research Board. He is presently teaching in the department, and is the Director of the Speaking Program.

George Norton, MA Ohio U, taught 1970-71 when he went to Southern W Va Com. College at Logan.

In 1971 courses added were:

- (a) Introductory Calculus (five hours) which has applications for students whose program requires a basic knowledge of Calculus. This course is not to be used as a calculus course required for mathematics majors or for the sciences. The prerequisite is Intermediate Algebra.
- (b) Modern Algebra (Mathematics 610, three hours and Mathematics 611, three hours).
- (c) Topology (Mathematics 630, three hours and Mathematics 631, three hours).

David A. Cusick, A.B. 1966, Indiana University; A.M. 1968, Indiana University; Ph.D. 1971, Indiana University, was appointed Assistant Professor in 1971. At the present he is still teaching in the department. During the summer of 1972 he received a grant from the Marshall University Research Board. He is a participant in the Speaking Program of the department. He serves as consultant for Valley Health System in Huntington.

Terence J. Reed, Ph.D. 1966, University of Minnesota, was Assistant Professor of Mathematics from 1971 to 1972.

David E. Fields, A.B. 1964, West Virginia University; M.S. 1966, Florida State University; Ph.D. 1970, Florida State University, was appointed Assistant Professor in Mathematics in 1972. He is still teaching in the department, and is a reviewer for Zentralblatt fur Mathematik and a participant in the Speaking Program of the department.

Jerry W. Fields, Ph.D. 1972, Texas Christian University, was appointed Assistant Professor of Mathematics in 1972. After two years, he left to work for the CIA in Washington, D.C.

John S. Lancaster, A.B. 1966, Indiana University; A.M. 1968, Indiana University; Ph.D. 1972, Indiana University, was appointed Assistant Professor of Mathematics in 1972. During the summers of

1973 and 1975, he received grants from the Marshall University Research Board. He is presently teaching in the department.

Mark D. Pankin, B.A. 1966, Wayne State University; M.S. 1968, University of Illinois, Chicago Circle; Ph.D. 1971, University of Illinois, Chicago Circle, was appointed Assistant Professor in 1972. During the summer of 1974, he received a grant from the Marshall University Research Board. He is presently teaching in the department.

A new course, Fundamental Concepts of Modern Algebra (Mathematics 452/552, three hours) was approved April 10, 1972.

The following courses were approved during 1973.

January, 1973:

- (a) Non-Euclidean Geometry (Mathematics 620, three hours).
- (b) Projective Spaces (Mathematics 621, three hours).
- (c) Theory of Functions of Complex Variables (Mathematics 640, three hours and Mathematics 641, three hours).
- (d) Theory of Functions of Real Variables (Mathematics 650, three hours and Mathematics 651, three hours).
- (e) Stochastic Processes (Mathematics 660, three hours).
- (f) Optimization Mathematics (Mathematics 665, three hours).
- (g) Independent Study (Mathematics 670, one to four hours)

April, 1973:

Thesis (Mathematics 681, one to six hours).

August, 1973:

Finite Mathematics (Mathematics 125, three hours).

H. Paul Greenough, B.A. 1968, DePauw University; M.A. 1970, Indiana University; Ph.D. 1973, Indiana University, came in 1973 as Assistant Professor in Mathematics. During the summer of 1974 he worked on "Combinatorial Aspects of Stochastic Processes" under Marshall University Research Board Grant. At the present he is still teaching in the department. He is consultant for Valley Health System and Region II Health Planning in Huntington.

The following courses were approved in 1974.

June, 1974:

Introductory Statistics (Mathematics 225, three hours)

December, 1974:

Special Topics in Mathematics (Mathematics 470/570, 471/571, 472/572, one to three hours).

In March, 1975, Remedial Mathematics (Mathematics 100, three hours) was approved.

In order to recognize and reward mathematical excellence of high school students in the service area of Marshall University, the Department of Mathematics has established a Mathematics Competition. Approximately 50 high school students from throughout West Virginia, Southeastern Ohio and Eastern Kentucky will be invited to Marshall to take a mathematics test which will demonstrate their basic mathematical skills and their mathematical creativity and originality. Cash awards will be given.

Resources:

Marshall College and Marshall University Catalogs

Records in the office of the Vice-President of Academic Affairs

Acknowledgements:

Much credit and appreciation is due my Chairman and my department colleagues for helpful suggestions.

I am indebted to the following people for generous assistance:

Mrs. Cora Teel, Clerk-typist in Special Collections for Morrow Library

Miss Marion Green, Secretary to the Vice-President of Academic Affairs

Dr. Alma Noble, Professor Emeritus.

Mrs. Sylvia Sears, Secretary to the Department of Mathematics