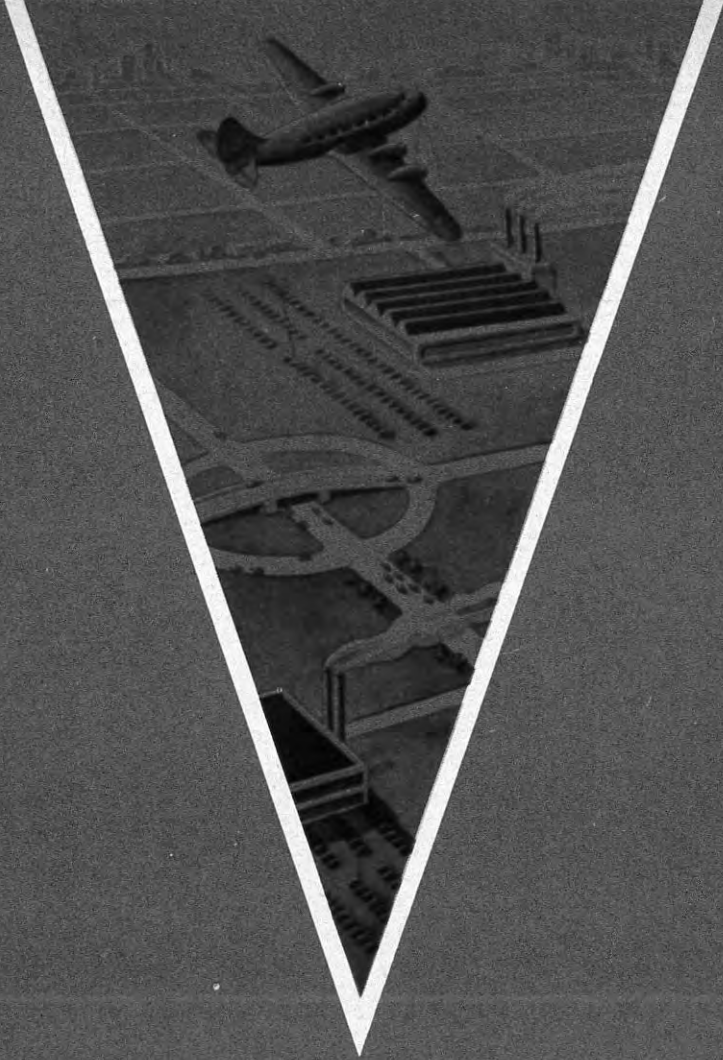




GENERAL MOTORS INSTITUTE

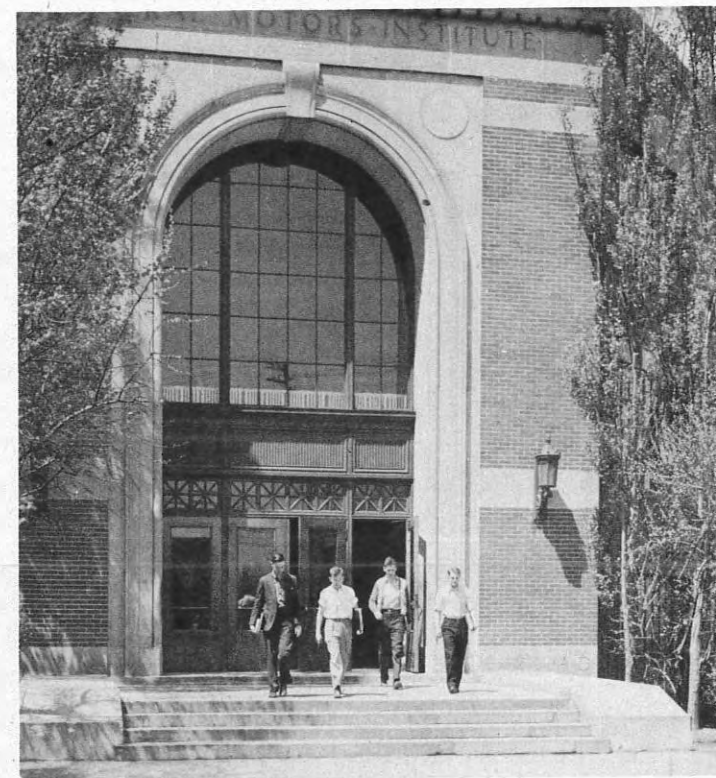


TRAINING FOR *Today* AND FOR NEW HORIZONS *Tomorrow*

THE FOCAL POINT FOR TRAINING IN GENERAL MOTORS . . .

For the War Effort TODAY

For New Horizons TOMORROW



Twenty-fifth Anniversary Year 1944

GENERAL MOTORS INSTITUTE •



AMERICAN INDUSTRY AN ACHIEVEMENT OF MEN

The war in which we have been engaged has focused the attention of the American people as never before upon industry and upon its vital importance in winning the war.

On every front there is found evidence that this war is a war of machines—tanks, armored cars, airplanes, warships—and their necessary complement of arms and munitions. Without them—or even with them in inferior quality or shortages in quantity—our armies and navies, regardless of how well trained or how brave, would have been helpless.

These machines so vital to the waging of successful war are the products of industry. The American people can therefore point with renewed pride to the greatest industrial army in the world—American industry—which responded to the emergency, and which has made possible the winning of the war.

Like the army, the navy, or the air force, industry depends for its effectiveness upon the loyalty, the trained skill, and the faithful service of men and women. In engineering, in manufacture—in fact, in every aspect of its operation—industry is dependent upon the creative genius and production efforts of its people.

The progress which brought American industry to a position of world leadership, which enables it now to contribute to the war effort on a scale never before achieved, and which will enable it to make contributions to further progress toward new horizons after this emergency has passed—all of this represents the achievement of trained men.

COPYRIGHT 1944, GENERAL MOTORS INSTITUTE



ALFRED P. SLOAN, JR.



CHARLES E. WILSON

TRAINING AND DEVELOPMENT OF MEN INDUSTRY'S FIRST TASK

Thus has the war re-emphasized the training and developing of men as industry's first and most vital task.

The demand for production greater than any industry has ever before been called upon to meet required not only greater plants and greater productive facilities, but also greater numbers of skilled mechanics to man these productive facilities and greater numbers of trained leaders to direct their efforts.

Fortunately, American industry was, in a large measure, prepared to meet this demand, and even more important, was well experienced in meeting changed operating situations due to the continued progress in products and methods, essential factors in the maintenance of American industrial leadership. All this required sound, practical emphasis upon the training and development of its personnel.

In the early days of the craft guilds, the masters, through the apprentice system, made sound provision for the development of skilled craftsmen and future masters to carry on the business. In more recent years, our more complex modern industry has required a broadening of this early concept, and varied methods have been needed to meet the development of men required to carry on its varied processes—leaders, engineers, and skilled workmen alike.

The leaders of American industry have come from widely varying circumstances. They have come from poor, from middle-class, and from wealthy homes. They started their careers as unskilled workmen, apprentices, or college graduates trained in the arts and sciences. Their backgrounds were varied, but all had this

in common: They were molded and developed by the discipline of a functioning organization to become, in turn, executives and developers of men. Industry, in each case, has applied its special discipline and its training, irrespective of background, to develop and bring men with real ability to positions of leadership.

Thus industry, building upon the foundations supplied by the public schools and colleges, has developed its men—engineers, executives, skilled craftsmen—men of all types needed for industrial processes and industrial progress.

This process of developing men required acceleration to provide the skilled men and the leadership needed for the war effort. But when this period has passed,

the process will not end, for industry will then need men with the ability and the vision to carry forward the process of reconversion to the operations of peace in such a way as to conserve those factors in American life which made possible the winning of the war and which will contribute to further progress toward new horizons of tomorrow.

This, then, is industry's first and most essential task—to develop men for all phases of its operations, not by chance, but by well organized training and developing methods.

General Motors has been alert to this necessity. In General Motors Institute, the Corporation has for twenty-five years provided a focal point for its education and training. The

continuity of activity over this quarter century has preserved experience which can be applied to meet new needs. Here also the Corporation provided a research laboratory for the improvement of methods by which men are trained and developed and which in turn should contribute to progress in industrial management and in the quality of its manufactured products, both vital factors in industry's contribution to American security and well-being.



H. W. ANDERSON



TWENTY-FIVE YEARS OF EXPERIENCE IN DEVELOPING MEN FOR INDUSTRY



ALBERT SOBEY

In this task of providing a focal point for the educational and training activities of General Motors Corporation, the Institute applies twenty-five years of experience in developing men for industry. During this time, its program (in terms of man-hours of instruction given annually) has progressed to such an extent that it has become the largest ever conducted by any industrial organization.

The Institute came into being as an evening school sponsored by Flint factory employees who had united in the Industrial Fellowship League, which merged with the Flint Vehicle Factories Mutual Benefit Association four years later to become the Industrial Mutual

Association. Albert Sobey, Director of the Institute, began the project in the autumn of 1919. Only crude, temporary quarters in an old factory building containing extremely limited equipment were available. This lack of facilities, however, failed to diminish the interest of men who wanted to learn, or that of their leader who sought to help them.

"This setting was certainly not inspiring," Major Sobey recalls, "but out in the plants and in the lives of the men there were big and fascinating problems presenting opportunities for a real training service."

At this stage of Flint's industrial growth, two needs existed. One was for spare-time courses of education and training to meet the requirements of the employees of the plants. The other was for special courses which would yield trained men needed by the factories, but not furnished by the spare-time activities. This led to a two-fold policy for the early program building of the Institute.

It was natural that the spare-time work should be considered first. In this, to meet the varied needs of the men who presented themselves for training, there were organized short unit courses so constituted that the instruction could be largely individual in its application. With more than 200 units formed on this basis over the years, industrial employees have had no finer opportunity for training and self-broadening than that offered by the Institute.

A training course for foremen was also started in 1920, with the full support of the managements of all the Flint industries. From this beginning has developed the General Motors Management Training Program, which last year reached some 20,000 foremen and other executives in General Motors Divisions in the United States and Canada. To keep abreast of the swift changes in the industry, the program has constantly been extended and adapted to the changing conditions. A pioneer in this field, the Institute has also made important contributions to the advancement of this phase of training throughout industry in general.

Major Sobey carried on his work in comparatively crude quarters until 1923, when the Industrial Mutual Association was organized and the school was moved into the Industrial Bank Building. There a larger outlay of equipment made it possible to give full-time training called for by the requirements of the plants.

One of these requirements was for young men of broad practical and technical training for future positions of responsibility. To fill this need, the Cooperative Engineering Course was started at that time. Then the corresponding Cooperative Service Training Program was developed to assure a succession of adequately trained young men for future posts of leadership in the Distributor and Dealer organizations. With these courses under way, the Institute grew rapidly.

Many men contributed to this development. Beginning with G. R. Cowing, who became Assistant Director in 1921, many men were added to the full-time faculty. To the efforts of the faculty were added the interest and active support of hundreds of others from the plants of Flint contributing in various ways to the growth and development of the Institute during the early years.

These men—executives, engineers, and men of special knowledge and skills in all ranks—by serving on advisory committees and by contributing to the instruction given in various courses, aided materially in the development of the program and the effective nature of the training given.

In 1926 the Institute reached the limits of its facilities. At this point H. H. Bassett, then President of Buick Motor Company, drew the attention of officials of General Motors Corporation to the potentialities of the Institute. Mr. Bassett interested them in providing an adequate campus and plant and in

extending the services of the Institute to all the Divisions of the Corporation. When the first unit of the present \$1,200,000 plant was completed in the spring of 1927, the training center became General Motors Institute of Technology. This name was broadened several years later to General Motors Institute.

By 1940 the training facilities of the Institute were so largely drawn upon that 22,400 square feet were added in a new wing to the building. At the same time certain departments were reorganized to improve teaching and the laboratory facilities. In 1941, when the need for expansion was again felt, a larger addition was provided, making it possible to center student activities in the new building and permit further reorganization of shop, drawing, and laboratory facilities.

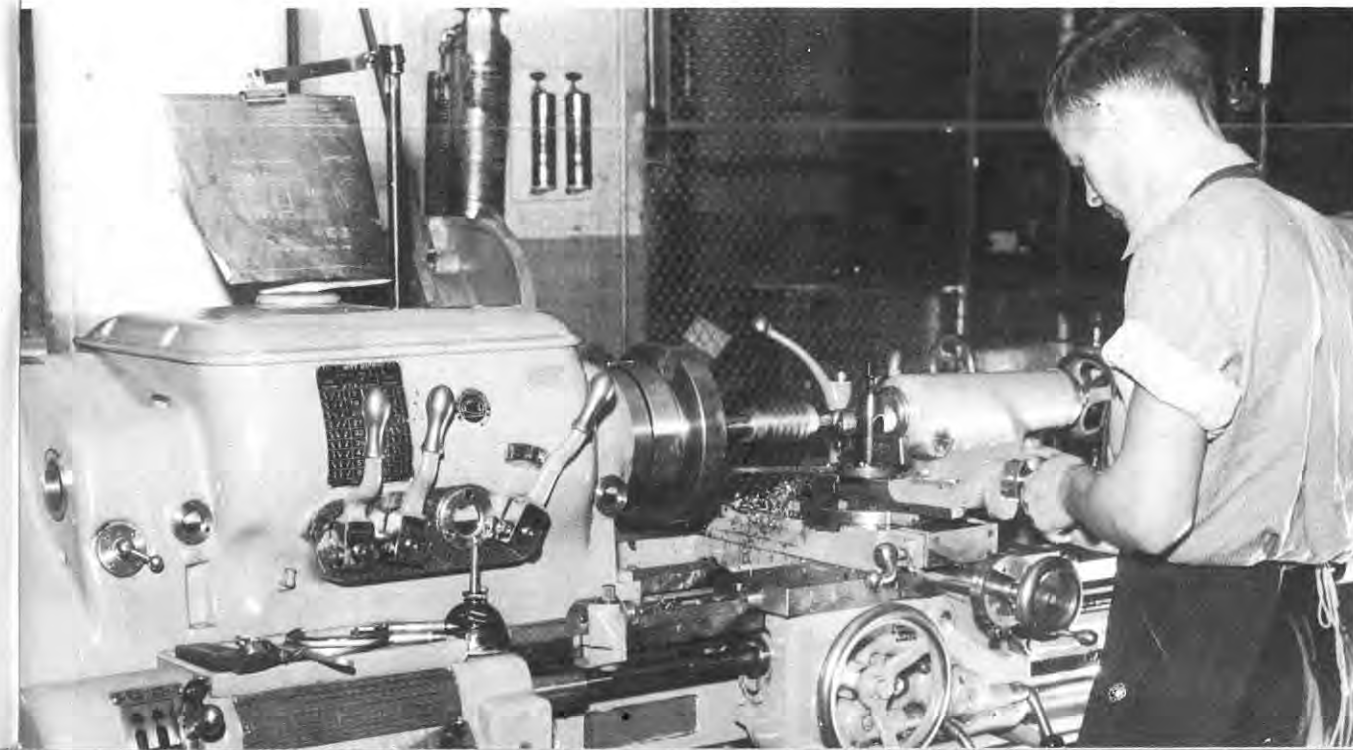
As the Institute began its larger task, the educational and training requirements of the Corporation grouped themselves under two heads:

1. Education and training required for development of members of the present organization.
2. Education and training required for proper induction of young, beginning employees, particularly those needed for future responsible positions.

To satisfy the first requirement and to meet the special training demands of the Plants and of the Distributors and Dealers, the Spare Time and Executive Training Programs have been extended, and numerous special programs developed.

To meet the second requirement, the cooperative courses have been extended and carefully adapted to the broader situations presented by the Plants of the Cor-

Practical Training on the Engine Lathe



poration and its Distributor and Dealer organizations. Contributions have also been made to trade apprenticeship training in the Divisions and to the training of college graduates for plant and field positions.

With the beginning of the War Emergency, first National Defense and then War Product Programs introduced important training problems, to the solution of which the Institute has brought to bear its broad experience.

Following Pearl Harbor, in January, 1942, the Institute was called upon to contribute to the training of the members of the Armed Forces in the operation and maintenance of General Motors-produced equipment. This contribution has included the design and development of courses of training for use in the Army-, Navy, Corporation-, and Institute-conducted courses; the training of Army and Navy instructors; and training courses conducted at the Institute for enlisted and commissioned personnel from practically all branches of the Service. Since the spring of 1942, the Automotive Service Laboratories of the Institute have been devoted almost entirely to this work.

A summary of this development, then, shows that the Institute now has three main functions:

1. To organize and conduct for the various Divisions of the Corporation and their employees, and also for General Motors Dealers and Distributors, training that can be given most effectively in a central institution.
2. To cooperate in organizing and conducting for the various Divisions of the Corporation, or for General Motors Dealers and Distributors, training that can best be given in the plant or in the field.
3. To serve as a research department, a central agency through which the best available thought and experience in education and training may be pooled for the improvement of training materials and training methods.

The first two are a part of the Program of Today; the third function serves as the basis for developing the Program for New Horizons of Tomorrow.



Modern Machines for Practical Work

PROGRAM OF TODAY

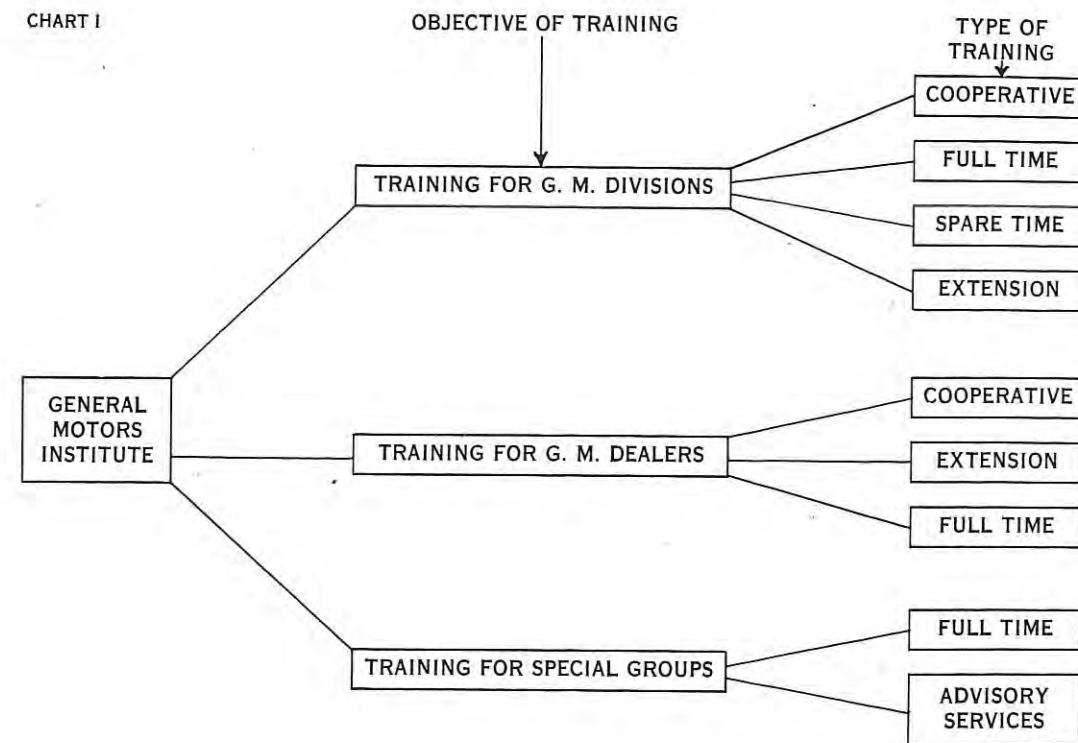
For the duration, the efforts of the Institute will continue to be directed to the training needed for the war effort—in the war industries and for the members of the Armed Forces. As this is done, however, in common with all loyal Americans and American institutions, the Institute is looking ahead to the end of the war and to the resumption of peace-time operations.

Fortunately, the major pre-war programs of the Institute, with one or two exceptions, were found to apply to the training needs of the war production (with some modification in application) as effectively as they did to the pre-war operations. These major programs will be described in general outline in the following sections.

As has already been indicated, the major programs evolved out of years of experience, and when considered together, are very extensive.

This would necessarily be true of a program designed to meet the training

CHART I



requirements of the large General Motors organization, through which, for example, over 33,000 men and women were reached last year in courses of shorter or longer duration conducted by members of the Institute faculty. In addition, other thousands were trained under plant leadership in the over-all program centralized through the Institute.

As would be expected, the program is necessarily varied in character and flexible in organization in order to make it readily adaptable to the needs of individuals, as well as to serve the needs of the Corporation and meet the training requirements introduced by the new developments which are occurring so rapidly in industry.

Some of the courses in the program are therefore extensive, covering up to four (and in special cases, five) years of training to provide young men with a broad foundation for future responsibilities. Some courses, on the other hand, are short and intensive, designed to meet the specific needs of experienced men or to provide the training necessary to cope with new situations and problems presented by industrial developments.

Some courses are conducted on a basis requiring full-time attendance at the Institute for periods of varied lengths; some are conducted on a part-time basis, including opportunity courses in evening school or spare-time training; some are conducted on the cooperative plan of alternate periods of practical training at the plant and technical training at the Institute; and some are conducted on an extension basis at the plants of the Divisions of the Corporation or with the Dealers and Distributors in the field.

For a brief but clear, graphic presentation of the more important phases of this extensive Program of Today, the following charts have been prepared, together with the accompanying explanations. The first, Chart I, gives a general outline of the program arranged in three main divisions:

Training for G. M. Divisions
Training for G. M. Dealers
Training for Special Groups

On the following pages the details of the various courses in these main divisions are given for convenience of reference. The illustrative charts and discussions are given in the following order:

- I. General Motors Cooperative Training Programs
 - A. The Cooperative Engineering Program
 - B. The Dealer Cooperative Program
- II. General Motors Full Time Specialized Training
 - A. Short Units—Intensive
 - B. Engineering Technician Training for Women
 - C. Business
- III. Spare Time Training
- IV. Extension Training
 - A. Extension at the Plants
 1. The Management Training Programs
 2. The Technical and Mechanical Training Programs
 - B. General Motors Dealer Extension Courses
- V. Training for Special Groups and Advisory Services
- VI. Training for the War Effort and the Armed Forces

GENERAL MOTORS COOPERATIVE TRAINING PROGRAMS

There are two types of General Motors Cooperative Training Programs: the Cooperative Engineering Program and the Dealer Cooperative Program.

A. THE COOPERATIVE ENGINEERING PROGRAM

The Cooperative Engineering Program is designed to give young men good practical and technical training for future positions of responsibility in the Divisions of the Corporation.

This program, as the name indicates, is based upon alternate periods of four or eight weeks of instruction at the Institute, followed by corresponding alternate periods of practical work in the cooperating Plants or Divisions. The relationship between the Institute and the Plants contributes to a close coordination of these two phases of training.

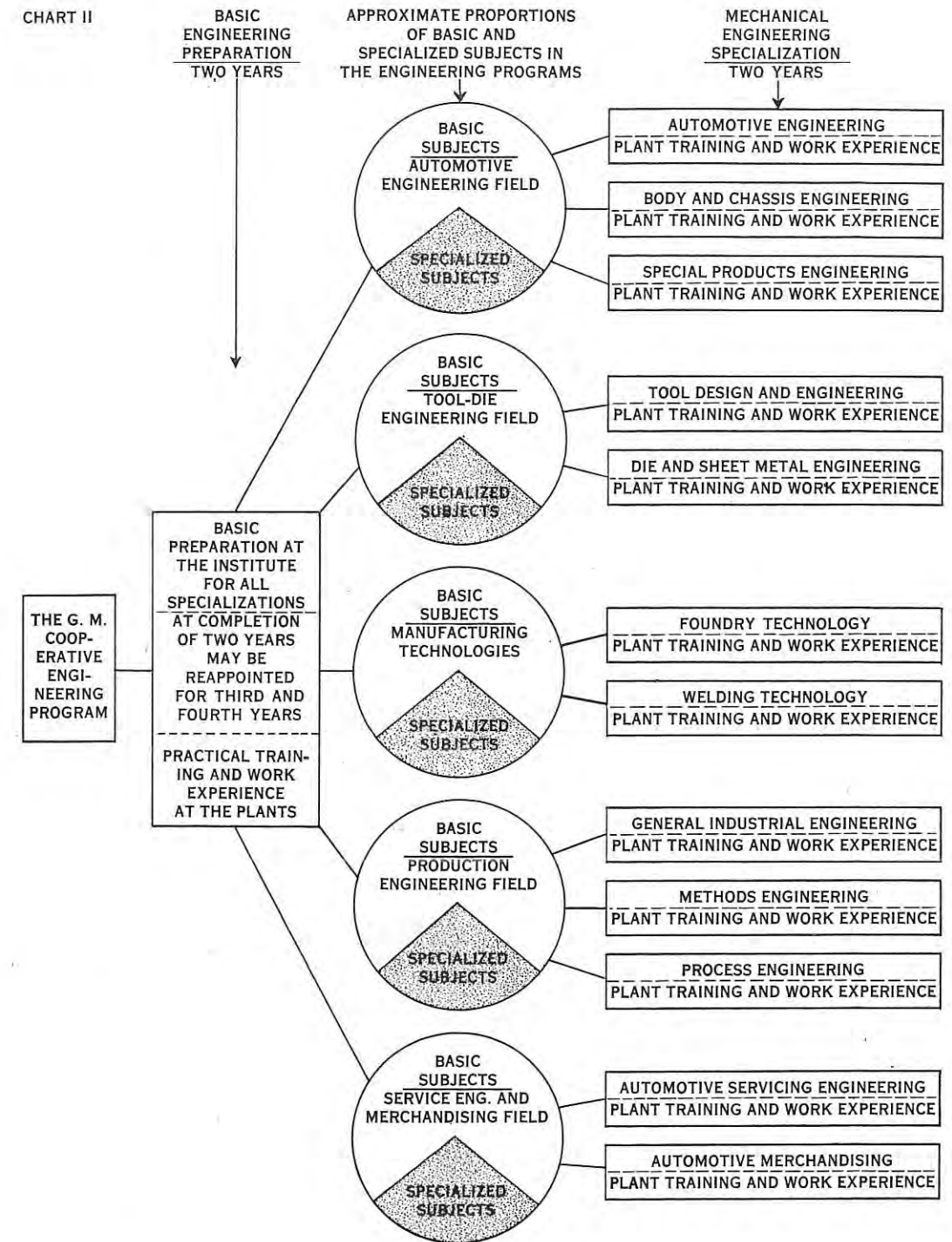
The number of men trained is restricted to the requirements of the Divisions of the Corporation. Men are selected by the various plant managements, subject to the approval of the Institute faculty from an educational standpoint. Throughout their course, these men are recognized as employees training for future work in their Divisions.

The men selected are appointed for fundamental engineering and practical training, as indicated in Chart II.

For their plant periods, definite work schedules are arranged to provide good mechanical training and experience in the work of the Divisions with which the students are connected. These work schedules also offer opportunity for the students to make good as workmen in preparation for lives of constructive usefulness to themselves and to their employers.

During the Institute periods, fundamental engineering training is given in mathematics, science, mechanical and tool drawing, shop practice and methods, and other subjects related to the work for which the student is being trained. This instruction is intensive in character and of college level, requiring the

CHART II



equivalent of a good high school foundation. For years, student appointment has been highly selective.

These two phases of training are coordinated by a series of reports which the students are required to write during their work periods. These reports, called Coordination Reports, follow organized schedules which parallel the students' work schedules.

It is the aim of the program—and it is sufficiently flexible—to provide the training needed to meet the requirements of the various Divisions and of the men taking it. Upon completing the two years of basic preparation, students are qualified for immediate work in the Divisions corresponding to the type of training they received.

When the record of a student in the first two years of his program is of sufficiently high standard and promise, he is given consideration for two more years of cooperative engineering training. Decision is made by the management of the cooperating Division after a conference with the student, at which the record and demonstrated ability of the student and the recommendations of the Institute are considered in the light of the needs of the Plant for men of engineering training.

The third and fourth years of the program are sufficiently flexible to enable the Plants or Divisions to enter other men of considerable previous training and experience for one or more years of special training at the Plants and at the Institute to prepare them for more effective work, or for broader responsibilities. In other words, these programs are designed to be of definite and practical service to both the Plants or Divisions and the men selected for this training.

Through the years, in cooperation with the Plants or Divisions of the Corporation, certain combinations of subjects or course specializations have been evolved to provide the most effective training in the Institute phase of the program in preparing men for the fields of work in which there is need for men of advanced training. These specializations are indicated on Chart II.

It may be noted that in each sequence, training is provided in certain basic subjects, and that approximately one-third of the total time of instruction is

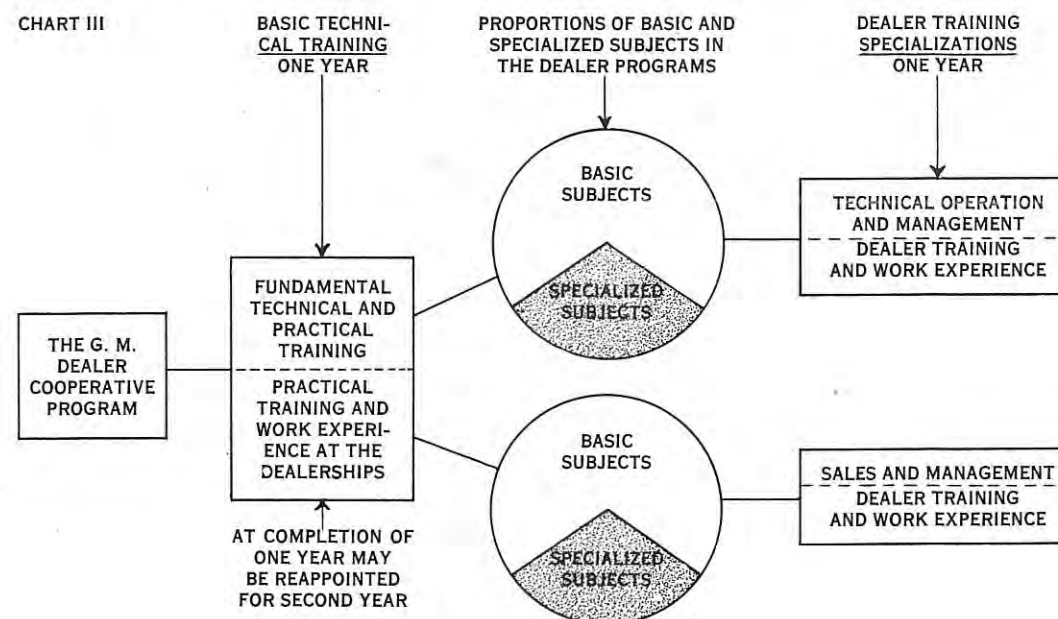
devoted to specialization. The basic subjects provide training needed for the general field, whereas the specialized subjects provide specific training for the branches of work in the field for which there is need for trained men not readily available from other sources.

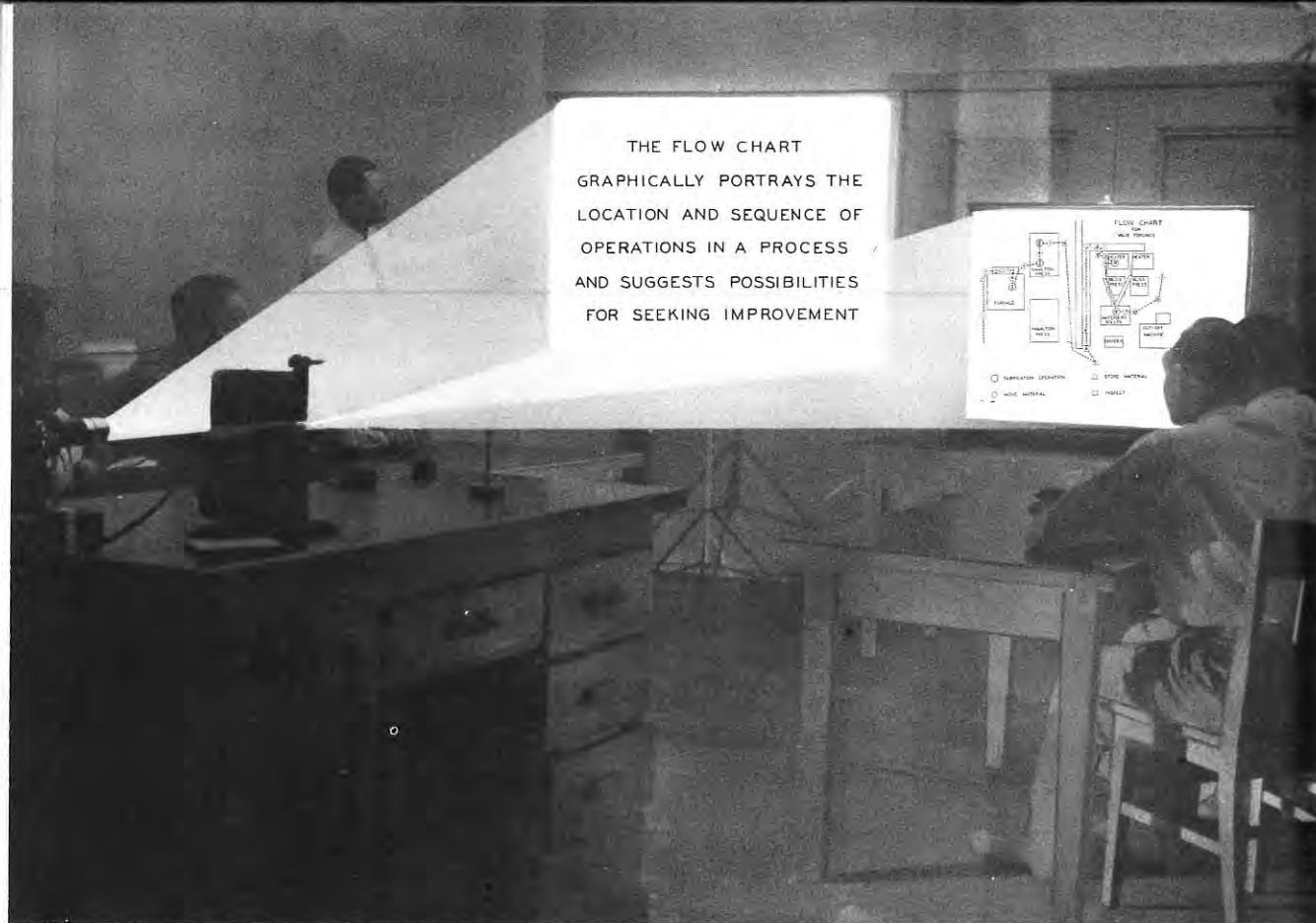
During the work period in the Plant the students follow work schedules organized to provide necessary practical training and experience. Coordination reports are also required, following a sequence closely paralleling the work schedule.

B. THE DEALER COOPERATIVE PROGRAM

The Dealer Cooperative Program, designed to meet the need for young men of broad foundation training to qualify for future responsibilities in the General Motors Dealer and Distributor organizations, corresponds in its general nature to the Cooperative Program for the Plants. This program was developed to aid the General Motors Dealer in his long-range development of "key men" for the future. It also offers to eligible young men a "Modern Business Apprenticeship" for the retail automobile business.

CHART III





Job Analysis and Improvement

GENERAL MOTORS FULL TIME SPECIALIZED TRAINING

Frequently other types of training situations arise in modern industry and are of great importance to the Plants as well as to the employees involved. These training situations will be considered from three points of view: short units of intensive training, engineering technician training for women, and business.

A. SHORT UNITS—INTENSIVE

The rapid developments that are constantly being made in machines, in tools and equipment, and in methods of manufacture, as well as corresponding

developments in other branches of industry, frequently present needs for short, intensive training for men of experience from the Plants and the field to cope with the new situations and problems that constantly arise.

Such a situation was presented, for example, by the very rapid development of hydraulic controls of machine tools and of manufacturing equipment. New problems requiring a knowledge of hydraulics and of practical hydraulic applications confronted plant maintenance men. Similar new problems from a design standpoint were faced by technical men in design departments.

To meet the situation, a hydraulic laboratory with special instructional equipment was organized at the Institute. Around this laboratory were developed two intensive and very practical full-time courses, one for maintenance men and one for technical men. This training, developed over the past four years, has already been given to over 500 men of varied experience from the Plants.

Like situations have arisen in such fields as electronics, resistance welding, precision instruments, gaging and inspection, job analysis and improvement, time study, process planning, and basic management. As a result, instructional laboratories and equipment have been arranged corresponding to those of the hydraulic laboratory, and courses of instruction have been organized and conducted to meet the corresponding requirements for training.

Similarly out in the field, new situations have arisen through the development of the new Diesel engines, by conditions arising because of insurance adjustments, and by problems of modern service management. These and other corresponding situations have also been met by short, intensive courses of practical training conducted at the Institute.

This experience of meeting new training situations and in dealing with men of wide experience from the plants and the field has had the further advantage of enabling the Institute faculty to strengthen and enrich other phases of the program, particularly the spare-time and cooperative courses.

Need for courses of this type has been even more frequent and pressing during the periods of conversion and war production than during normal peace-time operation.

SPARE TIME TRAINING

The original program of the Institute was organized on a spare-time basis to provide the employees of Flint industries opportunities for training and self-development. As the Institute now enters upon its second quarter-century, it is natural to think of the thousands of men and women who, during the past twenty-five years, have enjoyed the advantages of the "opportunity courses" of individualized instruction available in the Spare Time Program, and to recognize with deep satisfaction the degree to which the truth of the Institute's Spare Time slogan, "THE TRAINED MAN WINS," has been demonstrated in their experience.

That slogan was suggested by one of the executives of the Flint plants who was serving on an Institute Advisory Committee in the Fall of 1922, when the Institute was only three years old. Its appropriateness was quickly recognized, for even as that early date individuals with the initiative and the foresight to use

their spare time to add to their knowledge and "personal equipment" through Institute spare-time courses were making marked progress.

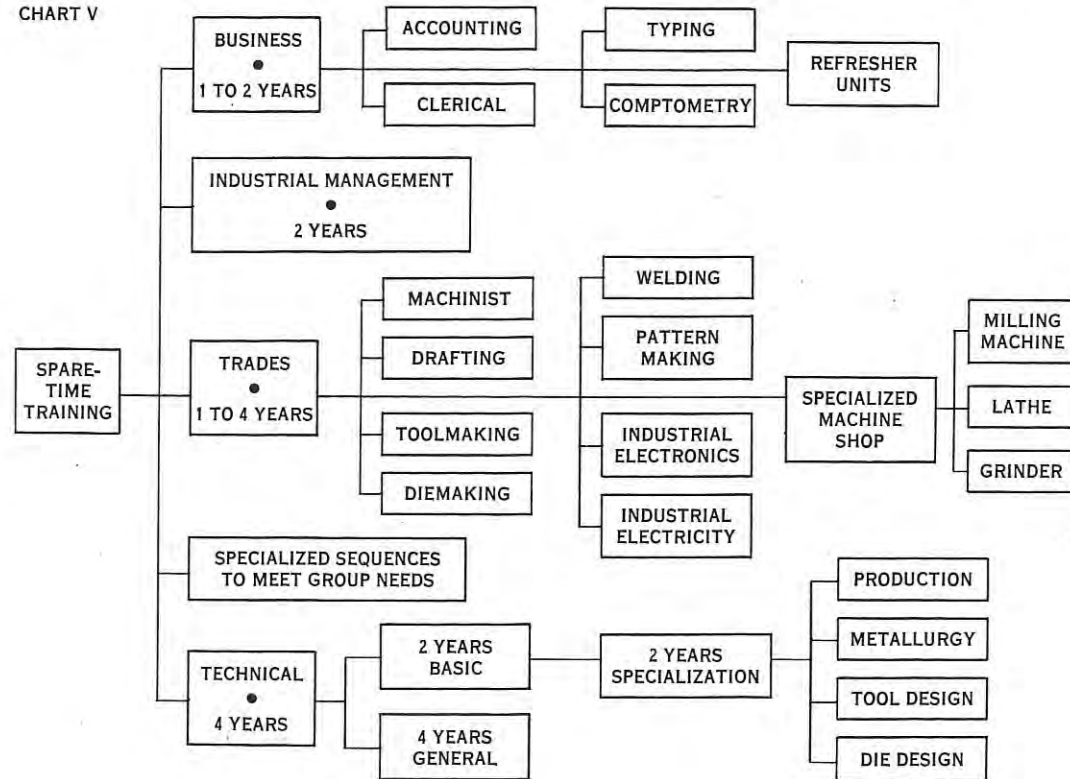
During the prosperous years of the "twenties" this trend of progress upward for spare-time trained men and women continued and expanded, and during the years of deep depression that followed, numbers of men and women were able to maintain their positions and even to continue to advance because of the added skills and abilities which they had acquired in their spare-time training at the Institute.

As industrial conditions have changed in the years since the depression, and particularly during the period of conversion to war products, many individuals, through their own initiative and ability, assisted and directed by the Institute Spare Time Program, have prepared themselves for more highly skilled and more responsible positions. In every Division of the Corporation, and in many other organizations as well, large numbers of spare-time trained men and women in key positions are making a real success of their lifework and an important contribution to the War Effort.

To help the average worker in General Motors Plants in Flint obtain this needed training, over 200 units of spare-time instruction are available, requiring from one to four hours per week for a term of twelve weeks. Under certain conditions, the individual's schedule may be varied so that a unit may be completed in more or less than the regular term. Admission to unit courses is not dependent upon arbitrary requirements, but rather upon the ability of the individual to profit by the instruction given. Classes are held in the evenings for those who are working on the day shift, and during the day for those who are working on the night shift.

To provide more extensive training for those students who have long range objectives, many unit courses have been arranged in complete sequences, requiring from four to ten hours per week, for three to twelve terms. Since these sequences are made up of unit courses, by varying the units involved or by fitting the individual into the program at a point corresponding to his background and experience, it is possible to adapt major programs readily to the requirements of different individuals. Chart V indicates the scope of the G. M. Spare Time Training.

CHART V



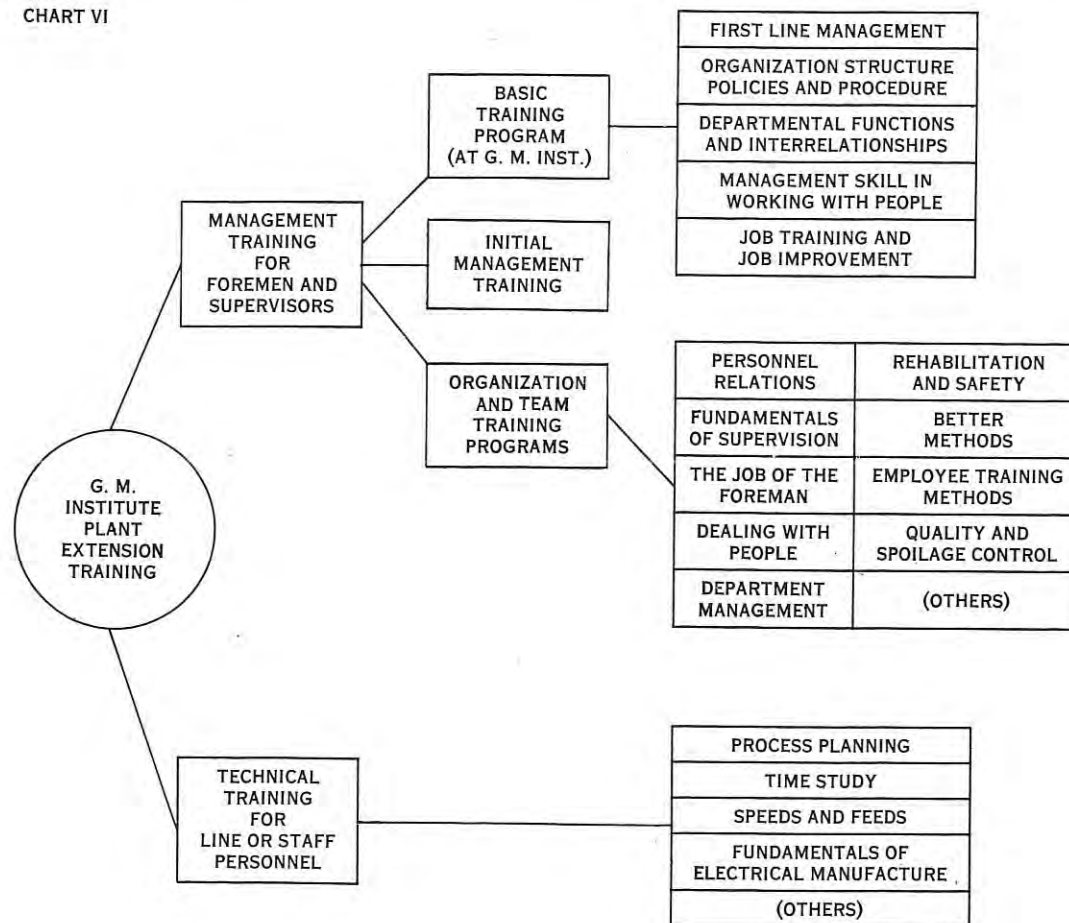
the master session. Action or policies are there decided upon, and then discussed with the rest of the groups. This cycle is repeated until a common understanding is arrived at which serves as a basis for uniform functioning.

The Management Training Programs are, in the main, conducted on a round-table discussion or conference basis. Background material and leader's manuals are provided by the Institute, and for many of the Divisions, trained conference leaders are also provided. Where the problems are peculiar to the plant involved, special material is often prepared.

2. THE TECHNICAL AND MECHANICAL TRAINING PROGRAMS

The Technical and Mechanical Training Programs are handled much the same as the Management Training Programs. When the need is evident in a given

CHART VI



plant for training in a technical or mechanical field, the specialists in that field at the Institute make an analysis of the need, and propose specific training to fill the need to the master group, and then train the people the plant desires to have trained.

The sections of the programs indicated on Chart VI are shown to illustrate the scope of the G. M. Institute Plant Extension Training. The Divisions find it valuable to have maintained for them at the Institute a *central pool*, where the experiences of each Division are available to all. This central pool of material is developed with the advice of a Corporation-wide Advisory Council in a form that permits complete flexibility to allow adaptation to varying situations. To make possible the required flexibility, training materials are developed on a unitized basis, representing the best Corporation experience and arranged as a kind of *cafeteria counter* from which they can be selected in any order needed, and applied to the specific requirements of any given Division.

CHART VII

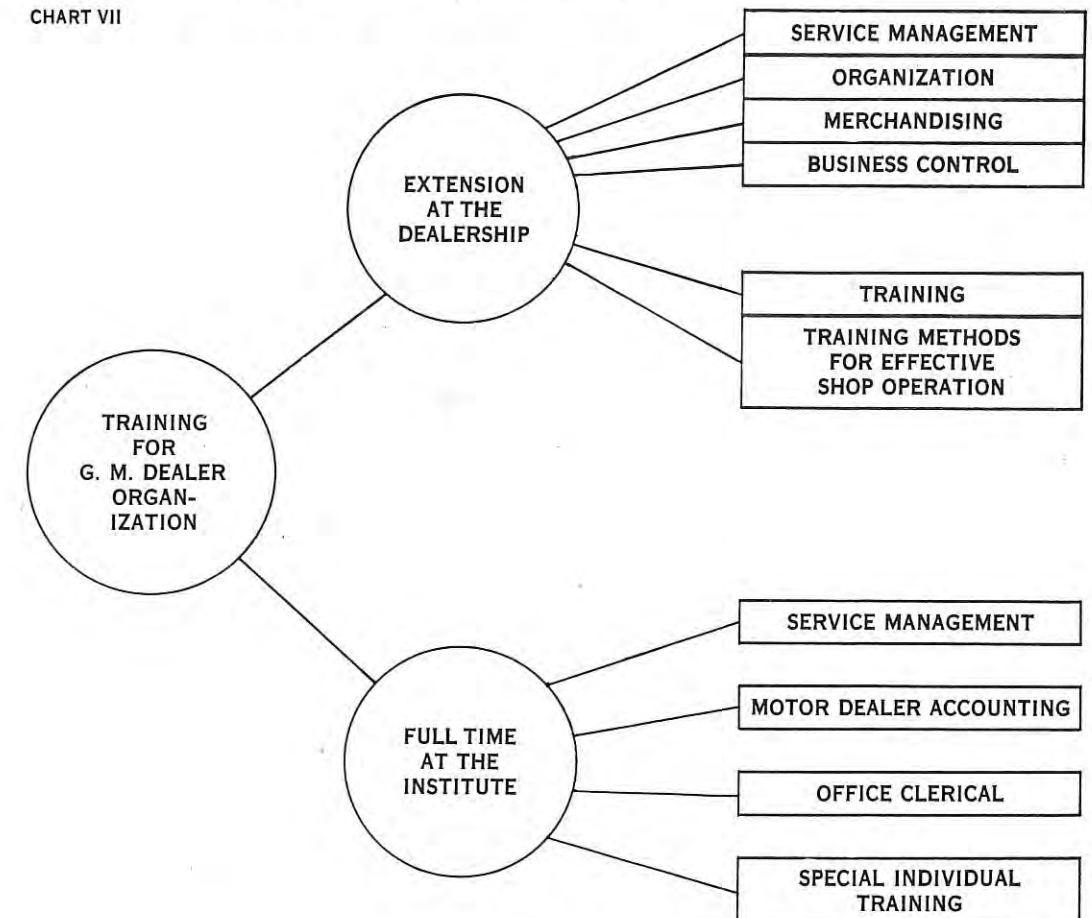
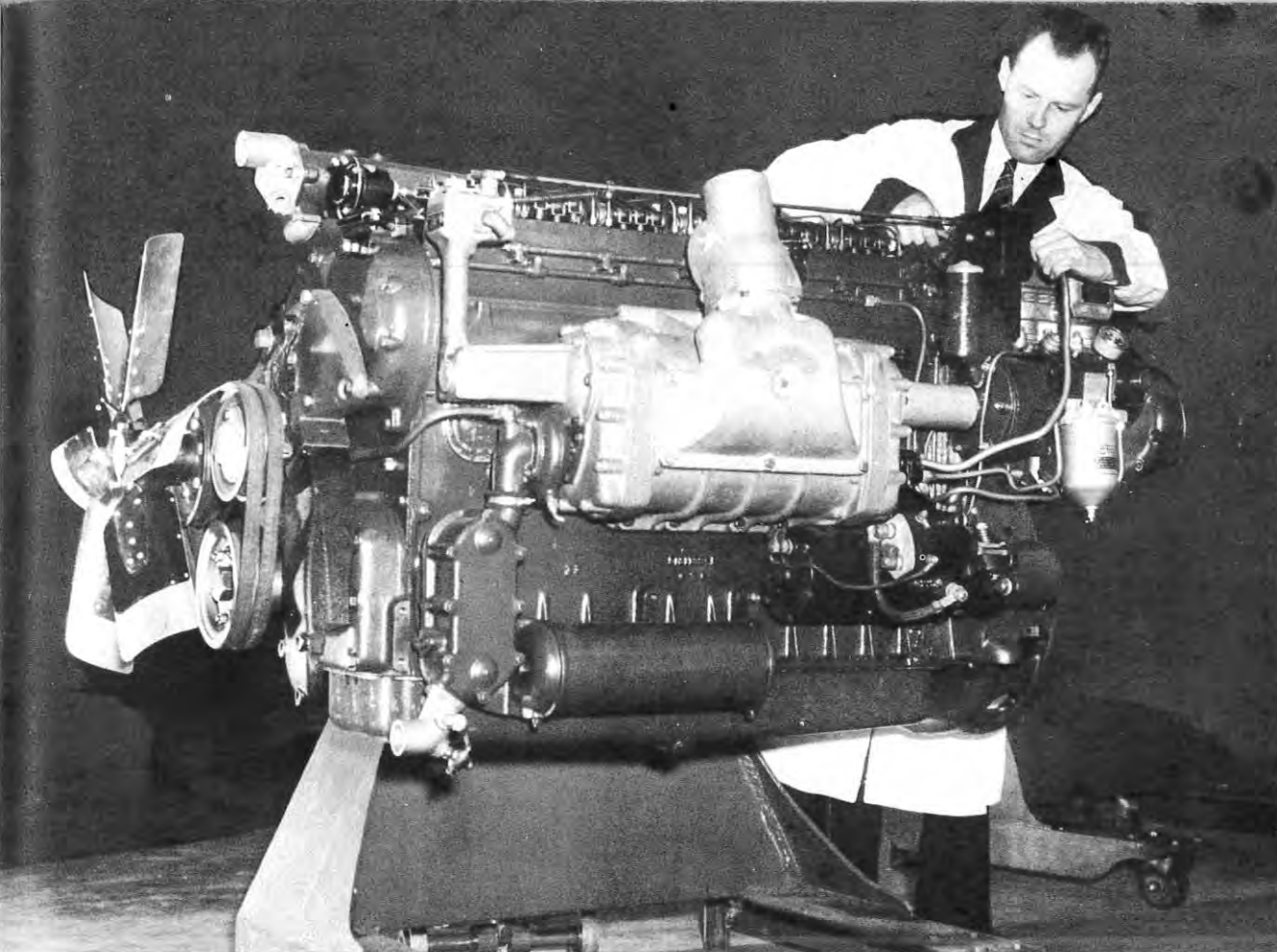
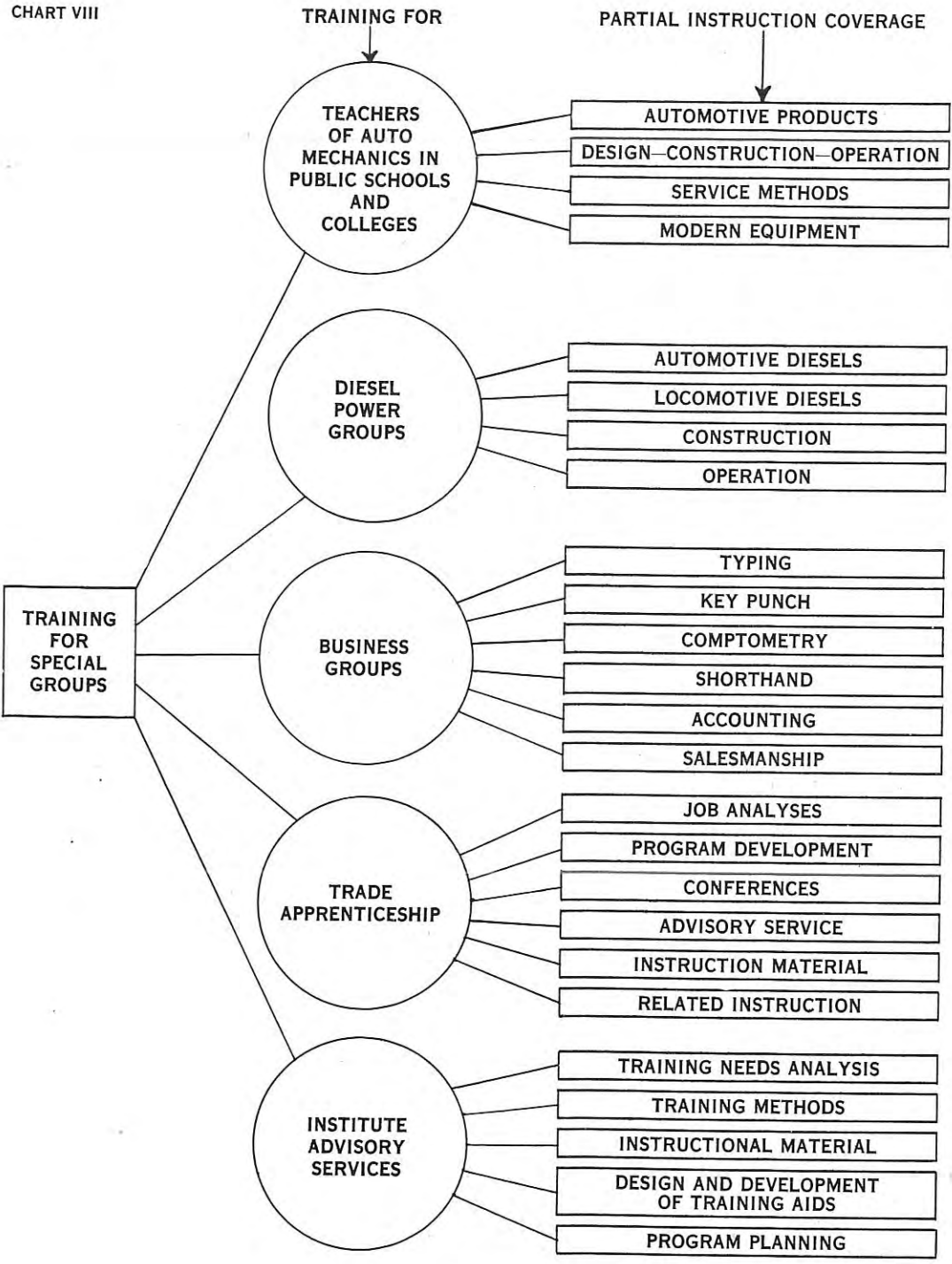


CHART VIII



Diesel Series "71"

TRAINING FOR THE WAR EFFORT AND THE ARMED SERVICES

As a result of the work that had been done over more than twenty years, General Motors Corporation was well fortified through General Motors Institute and its program to meet the training problems introduced into industry, first by the National Defense Program, and finally by the War Production itself.

Men who had been trained in the various phases of the Institute program were in the plants prepared for broader responsibilities. The program itself was well organized and functioning in such a way as to be readily expanded to meet the increased needs. Experience was available in the Institute staff to bring sound analysis and methods to the solution of the new training problems introduced by

the conversion of industry to War Production, and particularly to the training of new supervisors, the training of "trainers" of men required for specialized production jobs, and the training of men along specific technical lines involved in the War Production operations of the Corporation.

The Institute also contributed fully to all the National Training Programs that have been set up for this emergency—the Training Within Industry Program of War Manpower Commission, The National Defense and War Training Programs of the public schools and colleges, and other nationwide activities in this field.

When the Corporation was called upon by the Armed Services for aid in the training of members of the Armed Services in the maintenance of the various items of equipment manufactured by the Corporation, the Institute, through Training Service-General Motors War Products, played an ever increasingly important part in the training of instructors, the design and development of specific training programs, the conducting of certain Key courses for the Army and Navy for the quality control of such instruction within their own organizations as well as those of their Allies, and in participation in and the conducting of various Training Methods Seminars for both the Army and the Navy.

As each new War Products Training Program was developed, planning and design committees were formed made up of those experienced representatives of the Armed Forces, of the General Motors Divisions and of the Institute. This group of men worked together in the planning, writing, reviewing, and testing of the programs. The material put into the hands of the instructor and the student was, therefore, the product of the combined thinking of men who knew those war products from the widely varied points of view of use, manufacture, and training. Each step in the process was simply a pre-planning device for bringing into the program the insights from experience that are of greatest value to the student as he prepares to do a new job.

The result of this activity has been that over 8,000 members of the Armed Services have been trained through the Institute, which conducted seven of the twenty-three War Products Schools of the Corporation. The scope of the outside aid in design and development is evidenced by the fact that some 32 different Army and Navy training programs have been developed by the Institute in cooperation with various branches, such as the Armored Forces, Fort Knox; Training Division, Office, Chief of Ordnance; the Bureau of Personnel, the Bureau of Ships, and the Bureau of Aeronautics, U. S. Navy; the Naval Air Technical Training Command; the U. S. Coast Guard; the Engineers' Amphibian Command; and others.

DESIGN AND DEVELOPMENT

The training of men and women to meet the needs of General Motors involves a constant, continuous process of program development, for this is the only way to be sure that the training given them is meeting the current needs of the constantly changing industrial situation.

Paralleling the continuous program of training there is continuous program development in which the objectives, the content, and the methods of training, as well as the need for which they were designed, are regularly scrutinized. This constant view of current practice assures the instructional staff responsible for the quality of training that they are using the most effective training methods.

Month by month Institute programs are planned and written to meet new objectives, and existing programs are reviewed to include more effective methods of personnel development.

In all cases where it can be done effectively, this development work is approached through group thinking. Design groups made up of experienced men from General Motors Divisions meet together with members of the instructional staff and plan the objectives of the program, the content covered, and the methods to be used.

The widely varied types of training involved in this work naturally require varied development approaches to meet the different types of training situations. However, the following pattern of design and development is typical of all such work done at the Institute:

1. The needs of the plants determine what programs are to be developed.
2. The Corporation and Non-General Motors experience in this area of training is checked.
3. New programs are designed and developed through group thinking.
4. The new program is given a test run.
5. The new program is revised in the light of test run.
6. The experience of plants is continuously pooled to provide basis for further improvement.

This pre-planning follows closely the pattern used in any manufacturing plant. Experience is poured into the design and development of the new program, just as in a new product. Then the program is tested with an average student group under observation, just as the new product is tested on the proving grounds. Because of this pre-planning, experience has indicated that "tools" of instruction can frequently be developed to contribute to a more effective training job.

Through applications of this approach to development varied to meet the requirements of the Spare Time Program, the Cooperative Programs, the Extension Training Program, the War Training Program, and other divisions of the over-all program, the Institute has been able to meet the training needs of changing industrial situations in General Motors operations.



Techniques for Training G. M. War Workers

NEW HORIZONS OF TOMORROW

Finally, the Institute also has another—the research—function: To develop the training required for New Horizons of Tomorrow.

When the present period of emergency has passed, the nation will need to resume its peace-time pursuits to offset the problems introduced in the social, economic, and political life of the country during the emergency period, and to resume progress toward New Horizons of Tomorrow.

To accomplish this, the nation will again look to industry to push forward developments in products, in manufacturing, and in distribution; and the degree to which this is done will depend upon the extent to which industry discharges its primary responsibility—to train its men.

To develop the leadership and trained men for all the various fields of industry needed to bring about the desired progress will require emphasis upon training methods similar to the emphasis upon methods of developing products which has brought such rapid progress in that field.

Advance in product was relatively slow until the scientific methods of organized research were applied to product development. Thereupon progress was tremendously accelerated. It is logical then to assume that a full application of the methods of organized product research—of the questioning, checking, testing attitudes of scientists—will result in a similar acceleration of progress in development of men.

Certain fundamental principles underlie personnel development and the improvement of the human phases of industry in the same sense that basic principles underlie product development. The objective of research, therefore, should be to understand these principles more accurately and to apply them more effectively. This is the task to which this function of the Institute is directed.

In General Motors the Institute provides a central agency through which a constant effort is being made to apply a sound research approach to the various training problems presented by its large, complex organization. It also provides a channel for the pooling of the best thought and experience of the Corporation in this field to the end that improved methods will be developed and made available to all Divisions.

Thus, through the Institute, the leaders of the Corporation are taking steps to assure constant progress in methods of personnel development. In turn, employees of the Corporation are assured of the finest possible advantages for growth and progress; the Corporation of a continuing line of trained men possessing vision and the ability to maintain progress in product, manufacturing, distribution, and human relations. Through the Institute, the leaders of the Corporation have provided for the Training of Men for Today and for New Horizons of Tomorrow.



MEN BACK OF THE PROGRAM

"... in every aspect of its being—industry is entirely dependent on the creative genius and productive efforts of men and women."

In each Division of the Corporation for which and with which the Institute works, the successful development of the programs involved necessarily requires the cooperation of the members of the Division management with the Institute staff.

The growth and development of the Institute program is, therefore, an achievement of a large number of men—a number too large to list individually.

Representative of these men and the Management of General Motors Corporation is a Board of Regents composed of ranking executives of General Motors which is responsible for the formation and administration of the general policies of the Institute.



The Board of Regents . . .



V. A. OLSEN
President & Chairman



O. V. BADGLEY
Vice President



M. L. PRENTIS
Treasurer



A. F. POWER
Secretary

VICTOR A. OLSEN, President and Chairman
General Manager
Detroit Transmission Division

O. V. BADGLEY, Vice President
General Manager
Delco Remy Division

A. F. POWER, Secretary
Assistant General Attorney
General Motors Corporation

M. L. PRENTIS, Treasurer
Treasurer
General Motors Corporation

H. W. ANDERSON
Vice President in Charge of
Personnel Staff
General Motors Corporation

T. P. ARCHER
Vice President of General Motors
Corporation
General Manager
Fisher Body Division

I. B. BABCOCK
Vice President of General Motors
Corporation
General Manager
GMC Truck and Coach Division

J. J. CRONIN
Director, Industrial Relations
Fisher Body Division

HARLOW H. CURTICE
Vice President of General Motors
Corporation
General Manager
Buick Motor Division

N. DREYSTADT
Vice President of General Motors
Corporation
General Manager
Cadillac Motor Car Division

L. C. GOAD
Vice President of General Motors
Corporation
General Manager
Eastern Aircraft Division

E. R. GODFREY
General Manager
Frigidaire Division

E. A. HALBLEIB
General Manager
Delco Appliance Division

H. J. KLINGLER
Vice President of General Motors
Corporation
General Manager
Pontiac Motor Division

ARNOLD LENZ
Assistant General Manufacturing
Manager
Chevrolet Motor Division

GEORGE MANN, JR.
General Manager
AC Spark Plug Division

C. L. MCCUEN
Vice President in Charge of
Engineering Staff
General Motors Corporation

H. O. K. MEISTER
General Manager
Hyatt Bearings Division

E. B. NEWILL
General Manager
Allison Division

C. R. OSBORN
Vice President of General Motors
Corporation
General Manager
Electro Motive Division

S. E. SKINNER
Vice President of General Motors
Corporation
General Manager
Oldsmobile Division

J. H. SMITH
General Manager
Saginaw Malleable Iron Division

W. A. WECKER
General Manager
General Motors of Canada, Ltd.

C. E. WETHERALD
General Manufacturing Manager
Chevrolet Motor Division

J. C. DAVIDSON
Assistant Secretary
General Motors Corporation
Ex-Officio Member and Assistant
Secretary

ALBERT SOBEY
Director, General Motors In-
stitute
Ex-Officio Member



ALBERT SOBEY
Director

GUY R. COWING
Assistant Director

ADMINISTRATION

ALBERT SOBEY, Director

GUY R. COWING, Assistant Director

ROBERT H. SPAHR, Administrative Chairman, Cooperative Division

WILLIAM T. MAWHINNEY, Registrar and Office Manager

HAROLD T. KINLEY, Chairman, Department of Student Relations

CLYDE W. OUTLAND, Comptroller

JAMES C. WHITE, Administrative Chairman, Spare Time and Business Divisions

MARTIN S. FIRTH, Chairman, Program Research

FACULTY

DRAWING AND DESIGN

E. K. Harris, *Chairman*
 V. W. Irwin, *Ass't Chairman*
 Earl D. Black
 Harry E. Briggs
 Charles DeLate
 *Garrett Loode

ECONOMICS AND BUSINESS

J. C. White, *Chairman*
 Joseph Kuras
 *Frank Lanham
 Myrtle Nelson
 Paul H. Raker
 Harris Redmond
 John P. Riebel
 Melvia Schalk
 Wilma Sinclair
 Robert H. Stanley

ENGLISH AND CO-ORDINATION

C. A. Brown, *Chairman*
 R. H. Stanley, *Ass't Chairman*
 Arthur J. Fear
 John D. Petersen
 John P. Riebel
 *Robert E. Tuttle

EXTENSION TRAINING

Albert Sobey, *Chairman*
 C. C. McBratnie, *Ass't Chairman*
 Joel R. Allen
 Harold G. Baldwin
 Edwin G. Bowman
 Manley E. Brown
 Howard D. Dakin
 Casper J. Deigert
 Hilton O. Dexter
 Howard M. Fallis
 Emmett T. Fassett
 Frank W. Frazier, Jr.
 *On Military Leave

Richard L. Goodrich
 Roy E. Howard
 Richard R. Hutchinson
 George W. Kenning
 Glenn S. Kies
 Julius C. Lerch
 Martin L. Liddy
 Francis L. Madden
 Wallace H. Magee
 Michael Z. Massel
 William H. McGlothlin
 Mark L. McGovern
 Edward Oakley
 Earl W. Peterson
 William L. Rabenstein
 John W. Reedy
 Charles J. Sahrbeck, Jr.
 Lucian M. Skidmore
 S. Adair Smith
 Sherwood G. Spreiter
 Jesse A. Taft
 William F. Thomas
 Richard D. Van Camp
 Robert T. Weiser
 Wayne J. Wheeler

INDUSTRIAL ENGINEERING

R. H. Spahr, *Chairman*
 L. C. Lander, *Ass't Chairman*
 H. M. Dent, *Ass't Chairman*
 Howard F. Amos
 James M. Apple
 Vernon Casson
 Robert G. Freeman
 *Joseph McGinnis
 Russell Johnson
 Edward A. Reed
 Raymond Sharpe
 Norman Snyder
 *James J. Wenner
 Ormond F. Whipple

MACHINE AND WOOD SHOPS

F. L. Mackin, *Chairman*
 C. L. Fanning, *Ass't Chairman*
 Austin F. Cherry
 *Clarence W. Donnor
 William Hunter
 Elmer Menery
 Charles A. Mobley, Sr.
 Hildebrand Piuni
 *Edward W. Tryhuk

MATHEMATICS AND MECHANICS

C. E. Stout, *Chairman*
 A. G. Swanson, *Ass't Chairman*
 *Merle DeMoss
 Robert B. Osborn
 Paul H. Raker
 *Lawrence E. Schaeffer
 Louis R. Shobe
 Wesley J. Trathen

PRODUCT SERVICE

G. R. Cowing, *Chairman*
 M. L. Gilbert, *Ass't Chairman*
 L. M. Skidmore, *Ass't Chairman*
 ‡W. W. Squier, *Ass't Chairman*
 Harley J. Anderson
 *Charles A. Mobley, Jr.
 *Robert Neilson
 Herman Ruehle
 William D. Shanks
 ‡Neville T. Witt

SCIENCE

C. A. Tobias, *Chairman*
 L. B. Wocholski, *Ass't Chairman*
 F. D. Haskins, *Ass't Chairman*
 J. B. Proper, *Ass't Chairman*
 Harley J. Anderson
 Willard J. Duddles
 *Richard Heine
 Arne Holt
 Russell Johnson
 Robert B. Osborn
 Raymond Sharpe

WAR PRODUCTS

G. R. Cowing, *Chairman*
 M. L. Gilbert, *Ass't Chairman*
 Harley J. Anderson
 Louis H. Blood, Jr.
 Ralph L. Clark
 Eldon B. Draws
 Charles J. Fillion
 Otis T. Fisk
 Donald W. Garrett
 Remy K. Gebstadt
 Frank L. Greenwald
 Gerald T. Gregg
 R. D. Hardesty
 Robert G. Hay
 Nicholas L. Heinz
 Will J. Helseth
 Harold J. Henninger
 Arne Holt
 Charles F. Kelly
 F. Archie Love, Jr.
 Earl A. McAllister
 *Charles A. Mobley, Jr.
 Harold D. More
 *Robert Neilson
 Donald M. Padgett
 *Harry Perry
 Jesse B. Proper
 Herbert M. Sahie
 William D. Shanks
 Charles D. Stevens
 George H. Stoddard
 Phillo C. Tritten
 Archie A. Valteau
 Stephen W. Varga
 Walter L. Webster
 Raymond T. York
 ‡William W. Squier
 §Adelbert C. Hazen
 *On Military Leave
 †With General Motors Overseas War Service
 ‡With General Motors War Products Training Service.
 §Director, Allison Service School, Indianapolis, Ind.

STAFF

AUXILIARY OFFICES AND OPERATING SERVICES

Oscar Barnhart <i>Supervisor, Design and Development Staff</i>	Violet Hart <i>Librarian</i>
William F. Borgsdorf <i>Supervisor, Automotive Service Station</i>	Helen Henderson <i>Supervisor, Duplicating</i>
Laura M. Carpenter <i>Student and Alumni Records</i>	O. A. King <i>Supervisor, Supply Department</i>
John D. Cooper <i>Schedule Control</i>	Bertha Neal <i>Assistant Cafeteria Manager</i>
Rex Cooper <i>Supervisor, Cribs</i>	Frank S. O'Neil <i>Supervisor of Stores</i>
George J. Giel <i>Superintendent, Building and Grounds</i>	Frank G. Rutherford <i>Purchasing Agent</i>
T. A. Hammond <i>Acting Plant Engineer</i>	Edward F. Wheeler <i>Supervisor, Visual Aids</i>
	Lester F. Zerfoss <i>Design Coordinator</i>

PRINTED IN U. S. A.

