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WAR DEPARTMENT  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, D C

July 1, 1926.

SUBJECT: Faculty Report, Fifth Course,  
Army Industrial College.

MEMORANDUM: Chairman, Advisory Board,  
Army Industrial College.

1. Herewith is submitted copy of the  
Faculty Report covering the Fifth Course of  
the Army Industrial College for the period of  
February 1st to June 30th, 1926. A copy is be-  
ing furnished each member of the Board.

HANFORD MACNIDER,  
The Assistant Secretary of War.

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W.S.W.

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FACULTY REPORT.

Army Industrial College.

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1. The Fifth Course of the Army Industrial College occupied the period from February 1st to June 30th, 1926, incl. The following officers constituted the class which graduated on June 28th, 1926:

- Colonel Frederick W. Van Duyne, Q.M.C.
- Lieut. Colonel John B. Huggins, M.C.
- Lieut. Colonel John E. Hemphill, S.C.
- Commander Frederick V. McNair, U.S.N.
- Major Norman L. McDiarmid, M.C.
- Major Samuel S. Creighton, M.C.
- Major Robert Skelton, M.C.
- Major Henry R. Smalley, Q.M.C.
- Major Jeter R. Horton, U.S.M.C.
- Major Charles T. Harris, Ord.
- Major James H. Burns, Ord.
- Major Maurice B. Willett, C.W.S.
- Major Bethel W. Simpson, Ord.
- Major Glenn P. Wilhelm, Ord.
- Major Byron Q. Jones, A.S.
- Major Alfred L. Rockwood, C.W.S.
- Major Herbert J. Wild, C.E.
- Major Keith F. Adamson, Ord.
- Major Edmund deT. Ellis, Q.M.C.
- Captain Oliver P. Echols, A.S.
- Captain Edward S. Pegram, Jr., C.E.
- Captain Emil H. Block, Q.M.C.
- Captain John Biggar, Q.M.C.
- Captain Jerry V. Matejka, S.C.
- Captain Charles J. Morelle, Q.M.C.
- Lieutenant Leland C. Hurd, A.S.
- Lieutenant Cortlandt S. Johnson, A.S.

Upon recommendation of the Faculty Board, approved by the Commandant of the College, and in accordance with authority of the Secretary of War, the following named officers who have acted as lecturers and instructors in the Army Industrial College were

graduated therefrom on June 28th, 1926:

Lieutenant Col. Geo. E. Kumpe, S.C.  
Lieutenant Col. M. R. Hilgard, Q.M.C.

2. Methods of Instruction.

There has been no material change in the method of instruction since the Faculty Report of February 27, 1926, covering the Fourth Course at the Army Industrial College.

3. The following is an outline of the problems given during the Fifth Course:

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see also p 77

PROBLEM

- 1.      Orientation:  
          Organization, Plan-  
          ning and Control.                    A brief study of the principles of  
  Organization, Planning and Control;  
  their application in certain corpor-  
  ations and their application to the  
  agencies of the War Department which  
  deal with and are concerned with the  
  procurement and supply of materials  
  of war.
  
- 2.      Orientation.                            To determine something of the histor-  
  ical background of the office of the  
  Assistant Secretary of War, its  
  present duties and functions, and  
  exactly where it fits in the general  
  War Department scheme.
  
- 2-A.    Orientation.                            A study of the relations between the  
  office of the Assistant Secretary of  
  War and the General Staff in matters  
  concerning procurement contacts and  
  procedure.  
  (The different agencies which exist  
  for the purpose of National De-  
  fense can be placed in three  
  categories -  
  (1) Those agencies whose activities  
  are of such a nature as to  
  permit them being classified  
  under "Industrial Affairs";  
  (2) Those which can be classified  
  as "Military Affairs";  
  (3) Those whose activities are  
  both Military and Industrial).
  
- 3.      Orientation:  
          Mobilization and  
          Procurement Plans.                    It is desired that each student officer  
  secure a working familiarity with -  
  (a) The Basic Mobilization Plan of the  
  General Staff, its appendices, and  
  the annex to this plan pertaining  
  to his branch of the service.  
  (b) The War Plan of the Assistant Sec-  
  retary of War, and the annex there-  
  to pertaining to his own branch,  
  (c) with that part of the war plan of  
  his own branch pertaining to  
  procurement.

Attention should be paid chiefly to the  
underlying theories and broad principles

- 3. Orientation, cont'd. and decisions involved to the end that these plans may become useful references wherever applicable during the remainder of the course.
- 4. Sources and kinds of Information necessary in Procurement Planning and where they may be found. (Governmental and other agencies).
  - (a) A study of the activities of various governmental departments and bureaus to determine and list the sources and kinds of information available in these departments which would be of use in planning for procurement and mass production.
  - (b) Same as (a) above, for non-governmental agencies, e.g., U.S. Chamber of Commerce, Trade Associations, Technical Societies, etc.
- 5. Requirements.
  - (a) A study of the basis on which requirements for material for issue to troops are computed, and
  - (b) The computation of requirements of certain specific items.
- 6. Industrial Mobilization in France during the World War. A study of the problems and difficulties which confronted France in connection with her preparation for and participation in the World War, and the ways and means utilized in their solution - this from the point of view of industrial plants for production, obtaining raw materials, and supply of labor.
- 7. Industrial Mobilization in Germany during the World War. A study of the problems and difficulties which confronted Germany in connection with her preparation for and participation in the World War, and the ways and means utilized in their solution - this from the point of view of industrial plants for production, obtaining raw materials, and supply of labor.
- 8. Industrial Mobilization in Italy during the World War. A study of the problems with which Italy was confronted in preparation for and during the World War, and the ways and means utilized in their solution.

- 9. Industrial Mobilization during the Civil War by the United States and Confederate States. A study of the problems and difficulties which confronted the United States and the Confederate States in connection with their preparation for and participation in the Civil War, and the ways and means utilized in their solutions - this from the point of view of industrial plants for production, obtaining raw materials and supply of power, labor and transportation.
- 10. Strategic and Critical Raw Materials, sources and methods of marketing. A study of the sources and origin of supply of raw materials classed as strategic and critical; the principal markets in which these commodities are bought and sold, the usual commercial practice in transactions in these commodities, i.e., effecting of payments, basis of acceptance, units commonly used (tons, pounds, bales, barrels); usual methods of purchase (direct or through commission houses or brokers); any control which may exist and have to be considered in making purchases (Stephenson Act; Rubber, Brazilian Control of Coffee; Narcotics Act, U.S).
- 11. Integrated Organizations. To study the theory of some organizations which control production, from raw materials to finished products.
- 12. Transportation. A general study of the transportation situation in the United States in War.
- 13. Resources of the New York District. A study of the resources of the New York Industrial District (W.D.P.D.#3), available to meet the War Department needs.
- 14. Allocation of Facilities. A general study of the allocation of facilities.
- 15. Labor. A study of Labor in War.
- 16. Commodity Committees. A study of the function of the Commodity Division of the Office of the Assistant Secretary of War in the plan for war time procurement.

- 17. Resources of the Pittsburgh District. A study of the resources of the Pittsburgh Industrial District (W.D.P.D. #6) available to meet the War Department needs.
- 18. Power. A general study of the power situation in the United States as it affects Industrial War Planning and war-time procurement.
- 19. Priority. A general study of the Priorities and their application in war.
- 20. Personnel and Training. A study of the development of methods of recruitment and training of personnel for procurement in war.
- 21. Resources of the San Francisco District. A study of the resources of the San Francisco Industrial District (W.D.P.D. #14) available to meet the War Department needs.
- 22. Specific Procurement Plans. A study of what should be included in a specific plan for the procurement of a raw material, a finished product or a group of supplies.
- 23. Price Control. A study of the subject of Price Control in war.
- 24. Study of an Industry. A study of the effect of war on the Machine Tool Industry from the viewpoint of that industry.
- 25. Study of an Industry. A study of the effect of war on the Automotive Industry from the viewpoint of that industry.
- 26. Standardization and Change in Design. Changes in design in material in process work havoc with production. Such changes should, therefore, be kept to a minimum. Standardization and the use of commercial standards, where practicable, materially assist in securing and maintaining production. It is desired to have a general study made of the questions involved under the above subject.

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27. Factory Plans. To prepare an outline of a typical Factory Plan, what it should contain and in what details, in order that it may serve as an aid to the branches in making or checking factory plans.
28. War Reserves. A general study of the subject of War Reserves.
- 28-A. Exercise of Power of Commandeering. A study of ways and means of carrying out the provisions of that part of Sec. 120, National Defense Act, which provides that the Government may take possession of and operate manufacturing plants.
29. Interbureau Procurement. A study of the problem of Interbureau Procurement -  
 (a) in time of peace; and  
 (b) in time of war.
30. Budgetary Control and Accounting. Funds for Procurement. Conservation. To review committee reports on the above subjects submitted by preceding classes, in order that student officers may be informed on these important subjects which were not given out as specified problems due to the lack of time.
31. Studies of Assigned Commodities. The preparation of commodity studies of assigned items.
- 31-A. Procurement Plans. The preparation of Plans for the Procurement of a specific item, or class of supplies.
- Special Problem. The Task of Procurement in War. A study of the Procurement Problem of each of the supply branches in war.

4. The time distribution of the problems during the course is shown by Appendix "A", attached hereto.

5. Lectures - were given before the Class as follows:

February

- 1. Opening Exercises - 5th Class. Address by Colonel F.A. Scott, Ord. Res., Honorary Advisor, Army Industrial College.
- 2. Lecture, "Duties of the Assistant Secretary of War, concerning Procurement and his Relations with the General Staff and the Supply Branches", Director of Procurement.  
*↑ by H B Ferguson,*
- Lecture, Specific War Plan, Corps of Engineers - "Locomotives", Mr. J.W. Marsh, Civilian Expert, C.E.
- 8. Lecture, "The Procurement Plans of the Signal Corps", Major L. Watts, S.C.
- 4. Lecture, "Ordnance Mobilization Plans", Capt. V. Wilson, Ord.
- 11. Lecture, "Quartermaster Corps Procurement Plans", Capt. E.J. Glynn, Q.M.C.
- 15. Lecture, "Medical Corps Procurement Plans", Major R. C. Heflebower, M.C.
- 16. Lecture, Specific War Plan, Medical Corps - "Dental Instruments and Supplies", Major S.W. French, M.C.
- 18. Lecture, "The Procurement Plans of the Air Service", Major L.W. McIntosh, A.S.
- 19. Lecture, "Construction and Operation of Cold Storage Plants in France during the World War", Lt.Col. P.W. Evans, QM-Res.
- 20. Lecture, "Radio Developments and their future Possibilities", Lt.Col. David Sarnoff, SC-Res. (2d V.P., Radio Corp. of America).  
*Radio in relation to the problems of radio & service,*
- 24. Lecture, "Procurement Plans of the Corps of Engineers", Major H.J. Wild, C.E.
- 26. Lecture, "Procurement Plans of the Chemical Warfare Service", Major Fred Seydel, C.W.S.

March

- 2. Lecture, Specific War Plan, Air Service - "Parachutes", Capt. W.H. Crom, A.S.
- 13. Lecture, "Observations in Europe", Gen. C. L'H. Ruggles, Ord.

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March

- 16. Lecture, Specific War Plan, Chemical Warfare Service, "Soda Lime", Major Fred Seydel, C.W.S.
- 22. Lecture, "The Story of Dynamite", Mr. Arthur LaMotte, of the DuPont Company.
- 23. Lecture, "The Telephone Company and National Defense", Gen. J.J. Carty, O.R.C. (Amer.Tel. & Tel. Company).
- 29. Lecture, "A General Survey of the Strategic Minerals Situation", Major G.A. Roush, SS-Res.
- 30. Lecture, "Manganese", Major G.A. Roush, SS-Res.  
Lecture, Specific War Plan, Quartermaster Corps, "Hides, Leather and Quebracho", Capt. A. Stanley, Q.M.C.
- 31. Lecture, "Antimony and Tungsten", Major G.A. Roush, SS-Res.

April

- 1. Lecture, "Platinum and Mercury", Major G.A. Roush, SS-Res.
- 2. Lecture, "Nickel and Tin", Major G.A. Roush, SS-Res.
- 7. Lecture, "American Political Experiences in time of War", Prof. Wm. Starr Myers.
- 9. Lecture, "Transportation", Major E.C. Kelton, C.E.  
Lecture, "Improvisation as a Resource in <sup>modern</sup> ~~a~~ Major War", Colonel F.A. Scott, Ord-Res.
- p 374 13. Lecture, Specific War Plan, Ord. Dept. - "Procurement Plan, Baltimore Ord. District", Capt. Wilkins, Ord.
- 14. Lecture, "Allocation of Facilities", Major R.R. Nix, Ord. ✓
- 15. Lecture, "The Medical Corps in Procurement Planning", Maj. Gen. I.W. Ireland, Surgeon General.
- 20. Lecture, "Power", Major E.C. Kelton, C.E.
- 21. Lecture, "Some Aspects of Rail Transportation", Mr. R.H. Ashton. ✓
- p 246 28. Lecture, "Priorities", Major R.R. Nix, Ord. 251

May

- 4. Lecture, "Current Procurement", Lt.Col. E.D. Peek, C.E. ✓
- p 302* 5. Lecture, "Price Control", Lt.Col. W.C. Baker, C.W.S. *Dis-312*
- 7. Class made inspection trip to the United States Industrial Alcohol Company and the Industrial Chemical Company, Baltimore, Maryland, at the invitation of Dr. H. S. Rubens.
- 11. Lecture, Specific War Plan, Corps of Engineers - "Shovels", Major H. J. Wild, C.E.
- 17. Lecture, "War Reserves", Major H. L. Rice, Ord.
- 18. Lecture, "Standardization and Change in Design", Major H. L. Rice, Ord.
- 20. Lecture, "The Work of the Division of Simplified Practice", Mr. R. M. Hudson, Chief, Division of Simplified Practice, Department of Commerce.
- 22. Lecture, "Industrial Preparedness", The Assistant Secretary of War, *Hanford MacNider*  
Lecture, "Federal Team Work", Brig.Gen. H. M. Lord, Director of the Budget.  
(Above lectures were delivered before the Convention of Quartermaster Reserve Officers - students attending).
- 24. Lecture, "Steel", Dr. J.S. Unger, Carnegie Steel Company. ✓
- p 392* 25. Lecture, Specific War Plan, Quartermaster Corps - "Melton Cloth, O.D., 20=oz.", Capt. A. Stanley, Q.M.C.
- 26. Lecture, "Organization of the Eastman Kodak Company", Mr. E. M. Palmer, Industrial Economy Division, Eastman Kodak Company. ✓
- p-286* 27. Lecture, *Some experiences while a member of the U.S.A.* "Industrial Mobilization", Mr. L. L. Summers, (Member, War Industries Board). ✓ *385*

June

- 8. Lecture, Specific War Plan, Air Service - "Primary Training Planes", Capt. W.H. Crom, A.S.
- Lecture, Specific War Plan, Ord. Dept. - "Procurement of 75 m/m Ordnance Guns", Lt. J.M. Irwin, Ord. Dept.

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June

- 17. Lecture, "Procurement Planning", Lt.Col. M.R. Halgard, Q.M C. ✓
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- 18. Lecture, "Contracts", Gen. C. L'H. Ruggles, Ord. ✓
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- 28. Graduation Exercises, Fifth Class. Address by Mr. Robert ✓  
S. Brookings, Honorary Advisor, Army Industrial College.
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6. War Game. The last week of the course was devoted to a War Game. Various situations were presented to the Class for solution, all bearing on matters of procurement so selected as to impress upon the student officers the exact functions of the Office of the Assistant Secretary of War and its relations to the General Staff, Army and Navy Munitions Board, and other interested agencies. The Game was played with a good deal of enthusiasm and interest, and it is believed much benefit was derived therefrom.

7. Comments and Criticisms: Upon completion of the course, student officers were invited to submit comments and criticisms from their observations of the course. These comments have been examined by the Faculty Board, commented upon, and attached hereto marked Appendix "B".

8. The outline of the course for the next Class (Sixth Course) is appended hereto, marked Appendix "C".

H. B. FERGUSON,  
Colonel, C. E.,  
Commandant,  
Army Industrial College.

