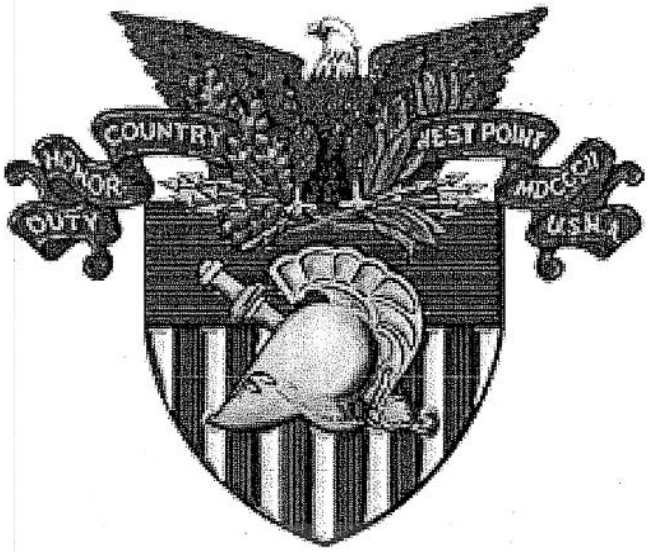
Approved:
OMB No.: 0702-0116
Expires:

WEST POINT ENGINEERING GRADUATES SURVEY

Information Systems Engineering



AGENCY DISCLOSURE NOTICE (ADN)

Public reporting burden for this collection of information is estimated to average 25 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Service, Executive Services and Communication Directorate, Information Management Division, and to the Office of Management and Budget Paperwork Reduction Project (0702-0116). Please DO NOT RETURN your form/survey to the above address.

Department of the Army Survey Approval Authority: U.S. Army Research Institute
Survey Control Number: DAPE-ARI-AO-06-21H; RCS: MILPC-3

Office of the Dean
United States Military Academy
West Point, New York 10996

WEST POINT ENGINEERING GRADUATES SURVEY

Information Systems Engineering

INSTRUCTIONS

- **Please complete this questionnaire by clicking the appropriate button that corresponds to your answer for each multiple-choice question. All questions should be answered, except where indicated otherwise.**

- **Free-response questions also are included. Please enter your responses directly on the survey form in the spaces provided.**

- **<u>Do not</u> enter your name, SSN, or other identifying information anywhere on the survey form. Results will be reported as group data only. Your responses will be kept strictly confidential.**

- **Your participation is important for the validity of the results. Failure to respond will result in no penalty to you; however, full participation is encouraged so that the data will be complete and representative.**

- **Your responses are not recorded until you click the "Submit" button at the end of the survey.**

- **We request that you complete the survey within 30 days.**

- **Your responses are not recorded until you click the "Submit" button at the end of the survey.**

- **Point of Contact for this survey is Ms. Janet T. Wolff, Institutional Research & Analysis, DSN 688-7384/2803 or (845) 938-7384/2803; e-mail: janet.wolff@usma.edu.**

INFORMATION SYSTEMS ENGINEERING GRADUATES SURVEY

PART I

Questions 1-6 ask you to rate various components of your engineering education at West Point. In responding to these questions, use the scale below to rate how well your engineering education at West Point prepared you in the following areas.

A. Excellent
B. Very Good
C. Good
D. Fair
E. Poor

Desired Outcome	Rating
1. Develop your problem-solving abilities?	A B C D E
2. Establish a sound foundation in design methodology?	A B C D E
3. Understand battlefield systems and operations?	A B C D E
4. Understand current Army technology and emerging technologies?	A B C D E
5. Prepare you for the Information Technology demands of jobs you (have) held in the Army?	A B C D E
6. Prepare you for your continuing education?	A B C D E

For Questions 7-10, use the scale below.

A. Strongly agree
B. Agree
C. Neither agree nor disagree
D. Disagree
E. Strongly disagree

I am confident in my ability to …

7. learn on my own – to identify what I know and don't know about a given problem and find answers to unresolved questions.	A B C D E
8. learn new aspects of my position on the job.	A B C D E

A. Strongly agree
B. Agree
C. Neither agree nor disagree
D. Disagree
E. Strongly disagree

9.	continue professional development through self-directed study.	A B C D E
10.	undertake advanced graduate study.	A B C D E

Indicate which of the following <u>Information Systems Engineering or information technologies-related</u> continuing education activities (Questions 11-17) you have completed?

	Activity	Yes	No
11.	Ph.D. in Information Systems Engineering	A	B
12.	Ph.D. in the information technology field	A	B
13.	MS/ME in Information Systems Engineering	A	B
14.	MS in the information technology field	A	B
15.	Courses leading to a graduate degree not yet obtained	A	B
16.	Courses not leading to a degree	A	B
17.	Non-credit courses taken through professional societies, universities, employers, or the Army	A	B

18. Please provide the following information for any non-information technologies-oriented graduate or professional degrees you have <u>begun</u> or <u>completed</u>:

Degree	Major	Institution	Completed (Yes/No)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

19. Are you a member of a military technical society (AFCEA, MORS, etc.)?

    A. No, never held membership.
    B. No, not now; was a member.
    C. Yes, but not a very active participant in society activities.
    D. Yes, and a very active participant in society activities.

20. Are you a member of one or more professional computing societies (e.g., ACM, IEEE, etc.)?

    A. No, never held membership.
    B. No, not now; was a member.
    C. Yes, but not a very active participant in society activities.
    D. Yes, and a very active participant in society activities.

21. Are you currently serving on active duty?

    A. Yes – **Skip to Part II, Question 25**
    B. No – **Continue with Question 22**

22. Which of the following describes your professional status as a civilian? **(Mark all that apply.)**

    A. Engineer
    B. Scientist
    C. Educator
    D. Sales/Marketing
    E. Manager/Executive
    F. Entrepreneur
    G. Software developer
    H. Network Operations
    I. Technical support
    J. Elected/appointed official
    K. Other professional
    L. Other (unemployed, full/part-time other professional or non-professional employee, full/part-time student, etc.)

23. Since leaving active service, in which sector of the economy have you worked professionally most of the time?

    A. Business/Industry
    B. Government
    C. Education
    D. Other
    E. Not applicable (e.g., unemployed, full or part-time non-professional employee, full-time student, etc.)

24. To what extent was your Information Systems Engineering education at West Point effective in preparing you for the computing, information technologies, or engineering-related tasks you have performed since leaving the Army?

    A. Very great extent
    B. Great extent
    C. Moderate extent
    D. Slight extent
    E. Not at all

PART II – PROGRAM SPECIFIC

Based on your professional experiences and accomplishments since graduation, assess the extent to which you feel you were prepared by USMA to do the following (Questions 25-39):

A. Very great extent
B. Great extent
C. Moderate extent
D. Slight extent
E. Not at all

Desired Outcome	Rating
25. Think creatively when constructing solutions to ISE or IT problems	A B C D E
26. Apply general Math-Science-Engineering knowledge to solving ISE or IT problems	A B C D E
27. Participate in constructing (not just planning, gathering requirements, documenting, etc.) software or systems to solve ISE or IT problems	A B C D E
28. Learn new skills on my own as part of solving an ISE or IT problem	A B C D E
29. Select and use the right tools to solve an ISE or IT problem, even if it requires me to learn more about them on my own	A B C D E
30. Recognize when abstract thinking is required in meeting an ISE or IT requirement	A B C D E
31. Employ an analyze-design-build-test methodology in constructing solutions to ISE or IT problems	A B C D E

A. Very great extent
B. Great extent
C. Moderate extent
D. Slight extent
E. Not at all

32. Understand and to a useful degree predict the impact of ISE or Information Technologies on existing organizations, processes, and environments	A B C D E
33. Communicate effectively using various media (writing, multimedia, web-based) as part of developing and fielding solutions to ISE or IT problems	A B C D E
34. Analyze and act on the results of tests and prototyping outcomes of new ISE or IT systems or solutions	A B C D E
35. Work effectively with a consumer of ISE or IT solutions to identify their true requirements.	A B C D E
36. Apply abstract thinking to ISE or IT problems when required	A B C D E
37. Contribute effectively to the solution of an ISE or IT problem as a member of a team of other ISE or IT professionals	A B C D E
38. Contribute effectively to the solution of an ISE or IT problem as a member of a team with members who do not have an ISE or IT background	A B C D E
39. Distinguish between new useful ISE technology and publicity-driven fads	A B C D E

Based on your professional experiences and accomplishments since graduation, assess the extent to which you feel you were <u>provided by USMA</u> with the following (Questions 40-43):

A. Very great extent
B. Great extent
C. Moderate extent
D. Slight extent
E. Not at all

Desired Outcome	Rating
40. A firm grasp of important fundamentals of the information systems engineering discipline	A B C D E
41. In-depth knowledge of at least one ISE topic area (computing systems, systems engineering, human factors, etc.)	A B C D E
42. Competence in many ISE and IT skills and technologies important to current and future Army needs	A B C D E
43. Knowledge and preparation, due to my senior-team computing project, sufficient to deal with real-world ISE and IT problems	A B C D E

44. Please mark your USMA Information Systems Engineering area of concentration:

_____ Computing Systems Concentration (AIC)
_____ Human Factors Concentration (AIH)
_____ Systems Engineering Concentration (AIS)

The following topics are part of the Information Systems Engineering curriculum. Please rate them according to how important they have been to you in your professional and personal life (Q45-54):

A. Extremely important (e.g., lack of this topic would have been a serious limitation)
B. Very important (e.g., it provided skills you are glad you have)
C. Moderately important (e.g., you're glad you covered this)
D. Slightly (e.g., it's just part of your general intellectual background)
E. Not at all important (e.g., you might as well have skipped it)

Topic	Rating
45. The Systems Engineering and Management Process (SEMP)	A B C D E
46. Computer tools (e.g., spreadsheets and databases)	A B C D E
47. Probability and statistics	A B C D E
48. Probabilistic modeling methods (e.g. queues, simulations)	A B C D E
49. Decision analysis (e.g. decision trees, decision support systems)	A B C D E
50. Engineering economics (e.g. net present value)	A B C D E
51. Project management (e.g. critical paths, earned value)	A B C D E
52. Computing systems (e.g., networks and operating systems)	A B C D E
53. Human Factors (e.g., cognition and human computer interface)	A B C D E
54. Capstone project	A B C D E

General Comments:

55. What advice would you like to give to the Information Systems Engineering Program? What should we be paying more attention to, and what should we be paying less attention to?

56. The greatest strengths of my USMA Information Systems Engineering education were:

57. The greatest weaknesses of my USMA Information Systems Engineering education were:

58. What do you feel should be added or changed in USMA's Information Systems Engineering program to ensure it remains relevant for newly commissioned officers?

Thank you for your contributions to the USMA Information Systems Engineering Program.