

APPENDIX C

**SURVEY, ASSESSMENT, STUDENT COMMENTS,
& GRADUATES**

SURVEY ANALYSIS AND GRADUATES

Department of Physics and Engineering
Point Loma Nazarene University

In December 1997 a questionnaire was sent to graduates of the department (copy attached). The target group was those graduating between 1979 and 1997. There were 49 names in the college's data base, 45 with addresses. 45 questionnaires were mailed. 22 (49%) were returned completed. About 10 were returned by the Postal Service for inadequate addresses.

Completed Survey: Physics Majors	9
Engineering Physics Majors	13

Individual responses are tabulated on spread sheets. Numbers choosing each choice are listed on the questionnaire. Additional comments provided by the graduates have been collected together in an accompanying document. What follows is a tabulation related to further education, jobs and how well prepared they were for graduate courses (question #7).

PHYSICS MAJORS (n = 9)

Further Education:

Ph.D.	2
Ph.D. in progress	1
Medical Doctor	1
Master's Degree	2
Flight school	1
Taken Grad Courses	2

Areas of study:

Physics	2
Engineering	3
Medicine	3
Flight school	1

Current occupation:

Professor of physics	2
Computer software engineer	3
Financial analyst	1
Radiology	1
Naval Aviator	1
no response	1

ENGINEERING PHYSICS MAJORS (n = 13)

Further education:

Master's + work on PhD	2
Completed Master's	2
Some graduate work	6
No response to question	2

Areas of study:

Physics	3
Electrical engineering	3
Mechanical Engineering	1
Engineering (area unspecified)	1
Computer engineering or science	3
No response	2

Current occupation:

Engineering	4
Computer science	5
Applied physics	1
No response	3

IF YOU WENT ON TO GRADUATE SCHOOL IN AN AREA RELATED TO YOUR STUDIES AT PLNC, HOW WELL WERE YOU PREPARED FOR THIS WORK? (QUESTION 7, COLUMN G ON SPREAD SHEET):

Very Well	3
Well	5
Average	2
Mixed	1
Somewhat weakly	0
Poorly	0
No response or N/A	11

ASSESSMENT QUESTIONNAIRE
Department of Physics and Engineering
Point Loma Nazarene College

Circle the choice that most closely describes you or your opinion of the program of PLNC's Department of Physics and Engineering. If a question does not apply, leave it blank. As these questionnaires will be graded by hand, you may add explanatory comments in the spaces after the questions.

1. What was your major?
A) Physics B) Engineering physics
2. What was your year of graduation?
A) 1975-80 B) 1981-85 C) 1986-90 D) 1991-96
E) Current student
3. Approximate GPA in major courses.
A) 2.0-2.5 B) 2.5-3.0 C) 3.0-3.5 D) 3.5-4.0
4. Approximate GPA for all courses.
A) 2.0-2.5 B) 2.5-3.0 C) 3.0-3.5 D) 3.5-4.0
5. If you continued your education after graduation, in what field?
A) physics B) engineering C) math D) computer science E) other

Name of precise area _____

6. Extent of further education:
A) Some courses B) Masters Degree C) some work on Ph.D.
D) Ph.D.
E) other _____
7. If you went on to graduate school in an area related to your studies at PLNC, how well prepared were you for this work?
A) very well B) well C) average D) somewhat weakly E) poorly
8. After finishing your education, how closely related was your first job to the training you received in the department?
A) Very B) considerably C) somewhat D) barely E) not at all
9. Rate your current job on the same scale as above.
A) Very B) considerably C) somewhat D) barely E) not at all
10. Your current job is most related to which of the following?
A) physics B) engineering C) math D) computer science E) none
11. What is your current occupation? _____

For what company? _____

12. How well did your education prepare you for your current job or the advanced education needed for it?
A) Very B) considerably C) somewhat D) barely E) not at all

13. If you could choose your major again, would you make the same choice?

A) yes B) no, but in same dept. C) no, in another dept.

Rate your satisfaction with your education in the PLNC Department of Physics and Engineering on the following scale:

A) Very satisfied B) Satisfied C) Neutral D) Dissatisfied
E) Very Dissatisfied (Skip questions that are not relevant.)

14. General level of instruction A) B) C) D) E)

15. Level of laboratory experience A) B) C) D) E)

16. Personal interest of Professors A) B) C) D) E)

17. Professor accessibility A) B) C) D) E)

18. Academic advising A) B) C) D) E)

19. Lower division physics courses A) B) C) D) E)

20. Lower division engineering courses A) B) C) D) E)

21. Upper division physics courses A) B) C) D) E)

22. Electronics courses A) B) C) D) E)

24. Use of computers A) B) C) D) E)

25. Integration of faith and learning A) B) C) D) E)

26. Christian example of Professors A) B) C) D) E)

Please add any comments about the program that you feel relevant.

OPTIONAL: Name _____ Class _____

Address _____

A	B	C	D	E	F	G
1 MAJOR:	GRAD. YR Range:	G.P.A. in MAJ:	Overall G.P.A.:	If don't education, in what field?	Extent of further Education?	If attended Grad. school in related area, how well prepared were you?
2 Physics	1975-80	2.5-3.0	2.5-3.0	Physics-solid state & complex systems Engineering-systems engineering	Ph.D.-Physics	some I was well prepared-E&M, Mechanics
3					M.S.-Engineering	some were weak-freq. domain analysis, stat.mech.
4					Some courses	n/a
5 Physics	1981-85	3.0-3.5	3.0-3.5	Engineering-Signal Processing	Masters Degree	well
6						
7						
8 Physics	1981-85	3.5-4.0	3.5-4.0	Engineering-Communications Emphasis	Masters Degree	very well
9						
10 Physics	1986-90	3.5-4.0	3.5-4.0	Physics	Ph.D.	very well
11						
12						
13 Physics	1991-97	3.5-4.0	3.5-4.0	Other-Medical Physics	Ph.D. is my intent	very well
14						
15 Physics	1991-97	3.5-4.0	3.5-4.0	Other-Pre-medicine	Some courses	No response
16						
17 Physics	1991-97	3.5-4.0	3.5-4.0	Other-Medicine	M.D.	No response
18						
19						
20 Physics	1991-97	2.5-3.0	3.0-3.5	Other-flight	flight school	No response
21						
22 Physics						
23						
24 Physics						
25						
26						
27 Eng/Phy	1981-85	3.0-3.5	2.5-3.0	Computer Science-Programming Languages & Operating Systems	Some courses	n/a
28						
29 Eng/Phy	1981-85	3.5-4.0	3.5-4.0	Engineering	Some courses	No response
30						
31 Eng/Phy	1986-90	3.5-4.0	3.5-4.0	Computer Engineering	Masters Degree & some on Ph.D	well
32						
33 Eng/Phy	1986-90	3.0-3.5	3.5-4.0	Engineering-Electrical	Some courses	well
34						
35 Eng/Phy	1991-97	3.0-3.5	2.5-3.0	Computer Science	No response	no response
36						
37 Eng/Phy	1991-97	3.5-4.0	3.5-4.0	Physics	Masters Degree	well
38						
39 Eng/Phy	1991-97	3.0-3.5	3.0-3.5	Engineering-MSEE	Masters Degree	average
40						
41 Eng/Phy	1991-97	3.0-3.5	3.0-3.5	No response	No response	no response
42						
43 Eng/Phy	1991-97	2.5-3.0	2.5-3.0	Engineering-Electrical	Some courses	no response
44						
45 Eng/Phy	1991-97	3.5-4.0	3.5-4.0	Physics-Space Physics	Masters Degree & some work on Ph.D.	Well
46						
47 Eng/Phy	1991-97	2.0-2.5	2.0-2.5	no response	no response	no response
48						
49 Eng/Phy	1991-97	3.5-4.0	3.5-4.0	Physics-Phys&Math based modeling of a sensor-communications system	other-I'm taking an Acoustics-modeling class from Dr. George Benfihen	no response
50						
51						
52						
53 Eng/Phy	1991-97	3.0-3.5	3.0-3.5	Engineering-Mechanical	Master Degree	average

	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Choose same major?	Level of Instruction:	Level of Lab Experience:	Personal Interest of Professors:	Prof. Accessibility:	Academic Advising:	Lower Div. Phys. courses:	Lower Div. Engin. courses:	Upper Div. Phys. courses:	Electronics courses:	Use of computers:	Integration of faith & learning:
2	Yes	satisfied	very satisfied	very satisfied	very satisfied	neutral	very satisfied	dissatisfied	very satis. & neutral	neutral	neutral	very satisfied
3	Yes	very satisfied	neutral	very satisfied	very satisfied	satisfied	very satisfied	satisfied	very satisfied	neutral	neutral	very satisfied
4	no, another dept.	satisfied	dissatisfied more than needed	very satisfied	very satisfied	neutral	very satisfied	no response	satisfied	no response	no response	very satisfied
5	Yes	very satisfied	satisfied	very satisfied	very satisfied	satisfied	very satisfied	no response	satisfied	neutral	there wasn't any	very satisfied
6	Yes	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	neutral	very satisfied
7	Yes	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied
8	Yes	satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	neutral	satisfied	satisfied
9	Yes	satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	satisfied	satisfied	very satisfied
10	Not sure	satisfied	no response	very satisfied	very satisfied	satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
11	Yes	very satisfied	satisfied	very satisfied	very satisfied	neutral	very satisfied	neutral	very satisfied	satisfied	neutral	neutral
12	Yes	very satisfied	satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	satisfied	satisfied	neutral	satisfied
13	No, another dept.	satisfied	neutral	very satisfied	very satisfied	satisfied	very satisfied	neutral	satisfied	dissatisfied	dissatisfied	neutral
14	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	dissatisfied	satisfied	satisfied	neutral	satisfied
15	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	satisfied	neutral	satisfied
16	Yes	very satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	neutral	very satisfied	satisfied	neutral	neutral
17	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	neutral	neutral
18	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	neutral	satisfied
19	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	neutral
20	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	neutral	neutral
21	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	satisfied	very satisfied
22	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
23	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
24	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
25	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
26	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
27	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
28	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
29	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
30	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	very satisfied
31	No, another dept.	satisfied	neutral	very satisfied	very satisfied	satisfied	very satisfied	neutral	very satisfied	dissatisfied	dissatisfied	neutral
32	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	dissatisfied	neutral
33	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	dissatisfied	satisfied	satisfied	neutral	satisfied
34	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	neutral	satisfied
35	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	neutral	neutral
36	Yes	very satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	neutral	very satisfied	satisfied	neutral	neutral
37	Yes	very satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	satisfied	neutral
38	Yes	very satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	satisfied	neutral
39	Yes	very satisfied	neutral	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	satisfied	satisfied	neutral
40	Yes	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	very satisfied	very satisfied	satisfied	satisfied
41	Yes	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	very satisfied	More needed	dissatisfied
42	Yes	very satisfied	neutral	very satisfied	very satisfied	satisfied	very satisfied	neutral	very satisfied	satisfied	very satisfied	dissatisfied
43	Yes	very satisfied	neutral	very satisfied	very satisfied	satisfied	very satisfied	neutral	very satisfied	satisfied	satisfied	neutral
44	No, probably in Comp. Sci.	satisfied	satisfied	very satisfied	very satisfied	dissatisfied	very satisfied	neutral	satisfied	satisfied	dissatisfied	satisfied
45	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	neutral	satisfied	satisfied	dissatisfied	satisfied
46	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	satisfied	not available	satisfied
47	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	satisfied	satisfied	satisfied	satisfied	neutral	satisfied
48	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	satisfied	very satisfied	very satisfied
49	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	satisfied	very satisfied	very satisfied
50	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	satisfied	very satisfied	very satisfied
51	Yes	very satisfied	satisfied	very satisfied	very satisfied	very satisfied	very satisfied	satisfied	very satisfied	satisfied	very satisfied	very satisfied
52	Yes	very satisfied	dissatisfied	satisfied	very satisfied	satisfied	very satisfied	dissatisfied	very satisfied	dissatisfied	dissatisfied	satisfied
53	Yes	very satisfied	dissatisfied	satisfied	very satisfied	satisfied	very satisfied	dissatisfied	very satisfied	dissatisfied	dissatisfied	satisfied

Z		AA
1		
2	Christian example of Professors:	<p>Note: Several Graduates wrote comments, suggestions, information, etc. Some of these may be quite interesting and/or helpful to you as you evaluate the program. I suggest you look over the responses with additional comments. I have made copies of the responses with additional comments and attached them to the end of this report.</p>
3		
4		
5	see comment on questionnaire	
6		
7		
8	very satisfied	
9		
10	very satisfied	
11		
12		
13	very satisfied	
14		
15	very satisfied	
16		
17	very satisfied	
18		
19		
20	satisfied	
21		
22	very satisfied	
23		
24	very satisfied	
25		
26		
27	satisfied	
28		
29	very satisfied	
30		
31	very satisfied	
32		
33	very satisfied	
34		
35	satisfied	
36		
37	neutral	
38		
39	very satisfied	
40		
41	very satisfied	
42		
43	satisfied	
44		
45	very satisfied	
46		
47	very satisfied	
48		
49	very satisfied	
50		
51		
52		
53	satisfied	

Physics Department Survey
Hand-written Comments

Jeff Brown, class of '94:

“Solid program, with good instruction/instructors. One area that could use some improvement is the amount of research/lab experience offered. It would help to have summer research programs/projects to help broaden the experience, as well as creating an environment for individual study/investigation.”

Russell Smith, class of '97:

“I thank you and the Physics faculty for your efforts in teaching and guiding students toward excellence in science..... Thank you again for your encouragement and challenge to be an excellent student.”

Ron Caton, class of '92:

“I would recommend increasing the emphasis on the importance and preparation for the GRE for those planning on graduate school.”

Referring to question #26, Christian example of Professors,
“Something you appreciate even more when attending public Grad. school”

Nathan Noble, class of '97:

“I feel that the education in physics I received at Point Loma was more than adequate for the requirements of graduate school curriculum.”

Ted Michno, class of '96:

“ I was well prepared by the upper division physics courses. As I have continued in engineering, I have seen that there are

a lot of parallels in different areas of physics and engineering. For example, the work that we went over in first semester Quantum Mechanics has proved an indispensable, enjoyable communication link between a co-worker and myself.....I very much enjoyed doing electron impact excitation research.

Candace D. Lewis, class of '96:

Referring to question #18, Academic advising, "PLNC continues to have a relationship with UCLA's Medical Physics program, which is great because it exposes their students to that field and they get to actually see what it's like. I think it would be even more beneficial for students if the same type of relationship was developed between PLNC and a Physics Grad. program. (not just a tour of a cyclotron or accelerator.) When I applied to Physics programs, I had no idea what specialty I was interested in—I didn't really know what "solid state physics" or "plasma physics" really included. And those schools don't seem to be interested in students that don't have a direction that they're leaning toward. Or course, the fact that I was already a Grad. student might have influenced this feeling, but I still think it's very important that every student headed to Grad. school (from PLNC) is at least familiar with how grad. schools categorize their fields of study and with research going on in local graduate Physics departments. More journals should be laying around, etc."

Matt Horney, class of '92:

"If you ever offer graduate level training, I'd be interested in knowing about it."

John Payton, class of '84:

"My current career, (Direction/Implementation of all 3D & 2D animations and graphics for Nissan/Infiniti corporate training CD-ROMs), would never have happened if not for my education at PLC and my 10 years of experience in computer software/hardware integration and test. Although my career

is not "directly" related to Physics, I feel that my education at PLC prepared me for any technical job by teaching me how to look at a problem, evaluate, hypothesize, simulate, test, debug. Basic problem solving skills are the most valuable asset. Knowledge of use of tools (such as Oscilloscope, Spectrum Analyzer, Logic Analyzer, etc.) is also another valuable asset."

"It would be much easier to talk about the impact of my PLC education on my life than to write it here. Suffice to say that I value the years I spent at Point Loma and am grateful for positive impact it has had."

Corey Johnson, class of '92:

"It would have been very beneficial for me to have had more electrical engineering courses. More specifically, comm. theory would have been ideal."

Jerry Gregory, class of '93:

Referring to questions #25 & 26, Integration of faith and learning and Christian example of Professors, "I think that the Christian learning environment was the best part of my overall experience at PLNC."

PHYSICS/ENGINEERING PHYSICS MAJORS
1977-1999

PHYSICS:

Brown, Jeffrey John
Collette, Craig Royce
Forster, Daniel J.
Goodwin, Gerald E.
Grace, Dennis Ray
Gregory, Gerald Hughes
Laisne, Mars M
Lee, John Joseph
Lewis, Candace Dawn
Mallory, Kendall E.
Meacham, Martin Philip
Olson-King, Charleste
Payton, John Alan
Porter, John Nolan
Poteau, Thierry G.
Ramtin, Sohrab C.
Robyn, Jeremy Tait
Salisbury, Brian E.
Stephenson, Mark A.
Walker, Barry Craig
Wilburn, Daniel Eugene
Young, Michael K.
Zimmermann, Mark W.

ENGINEERING PHYSICS:

Babcock, James R.
Bean, Jordan Matthew
Beans, Daniel Charles
Biggar, Jonathan P.
Caton, Ronald Glen
Clark, Curtis Ray
Enano, Alfredo C.
Gillespie, Adam Thomas
Gunter, Kevin Greg
Horney, Matthew D.
Hovis, Thomas
Jaquess, John Charles
Johnson, Corey Ryan
Johnson, Leslie Macon
Kelsey, Kevin John
Kochendorfer, Rodney M.
Lewis, Davina M.
Lin, Scott Li
Michno, Theodore
Moore, Jeffrey Keith
Nacionales, Paul Azura
Noble, Christopher A.
Noble, Frederick Nathan
Radic, Bruce
Smith, David Ray
Smith, Russell Glenn
Teebi, Hani Said

1999 PHYSICS MAJORS

Elynor Twyfort

1999 ENGINEERING PHYSICS MAJORS

Jordan Cunningham
Jason Rowland