

Our Best Minds and Efforts: Graduate Education at Vanderbilt

Introduction

This task force report is occasioned by several factors. Early in his tenure, Chancellor Gordon Gee made improving graduate education one of his five priorities for Vanderbilt. Soon thereafter a committee worked to advise then Provost Thomas Burish about improved organizational structures for the graduate school. In the fall of 2002, Provost Nick Zeppos and Vice Chancellor for Health Affairs Harry Jacobson examined the state of graduate education and prior recommendations for change and found them incomplete. Their memorandum to faculty called for a comprehensive analysis of graduate education at Vanderbilt and created a task force to provide such an analysis, together with recommendations for changes in graduate education, by January 15, 2003. This report is a response to the Provost and Vice Chancellor's charge.

Excellence in graduate education is both an engine of research innovation and a source of the kind of reputation that propels further progress in achieving quality throughout a university. Vanderbilt will not achieve its potential as a top university without success in the graduate arena. The task force began its work with an awareness that the "every tub on its own bottom" (ETOB) organizational philosophy that has made for ever stronger undergraduate and professional schools has proven itself maladapted to support excellence in graduate education, particularly in an age when excellent graduate education is not a source of net revenue for schools. The task force, therefore, was attentive in its work to places in the university where excellence in graduate education is already established. In addition, we identified new practices and structures that would improve graduate education more generally.

25 The phrase “best minds” in the title of our report suggests that faculty and their graduate
26 students should possess some of the best minds in the university. We recognize that through
27 their teaching, research, and mentoring, the faculty bear the ultimate responsibility for
28 excellence in graduate education. Neither a school nor a university as an administrative entity
29 can produce an excellent graduate scholar. Only faculty can make this happen. To this end,
30 each section of this report contains numerous proposals for enhancing and supporting faculty
31 involvement in the training of graduate students. Each section also recommends ways that
32 faculty can be leaders in reorienting the culture of Vanderbilt toward excellence in graduate
33 education and for rewarding faculty efforts on behalf of this long-term project. Thus, given our
34 best minds and efforts, the challenge of graduate excellence is within our reach. If the goal
35 could be more cheaply or easily reached, it already would have been attained. What follows,
36 then, is a detailed analysis of the state of graduate education at Vanderbilt and
37 recommendations to realize dramatic and sustained improvement in graduate education within
38 five to ten years.

39
40 The task force consisted of the deans of the five schools graduating significant numbers of
41 Ph.D.s, other faculty suggested by the Faculty Senate, and representatives from the Provost’s
42 office. Interim Dean of the Graduate School William Smith provided invaluable assistance
43 concerning current practices and options, and Jen St. Clair provided administrative assistance.
44 The task force met weekly to consider position papers composed by members of the group.
45 Perhaps the most gratifying aspect of our work was how easily agreements about how to
46 improve graduate education were reached. Although we did not prescribe solutions to all the
47 problems facing graduate education, we did define a number of actions that will, if taken
48 swiftly and boldly, enable each of the schools to realize dramatic improvements in their PhD
49 programs. Thus, strategies of various types are recommended in this report: decentralizing
50 some things; improving evaluation, accountability, and funding; centralizing other functions.
51 All these strategies have the support of the entire task force. We present our findings grateful
52 that we were asked to plot a course for the future of graduate education and hopeful that our

- 53 work may aid faculty and graduate students in exciting exchanges of learning and discovery in
54 the years ahead.
- 55 Camilla Benbow (co-chair)
- 56 Carol Burke
- 57 Roger Chalkley
- 58 Alan Cherrington
- 59 Jay Clayton
- 60 Steven Gabbe
- 61 Kenneth Galloway
- 62 Ellen Goldring
- 63 Dennis Hall
- 64 James Hudnut-Beumler
- 65 Richard McCarty (co-chair)
- 66 William Smith (ex-officio)

67

68

Part One: A Vision for Graduate Education at Vanderbilt

69

70

71 Vanderbilt's strategic plan sets dramatic transformation as its goal for graduate education.

72 Vanderbilt intends to become one of the few great institutions known for its world-class faculty

73 and the preparation of their successors--the next generation of intellectual leaders. Only a few

74 institutions have a consistent history of producing the very top scholars. Vanderbilt will become

75 one of those rare few, putting itself in the same league as Harvard, Stanford, Caltech, and the

76 University of Chicago in attracting those who will become the passionate scholars society will

77 come to remember.

78

79 Differing areas of specialization and strength will distinguish Vanderbilt from other illustrious

80 institutions. Graduate students will come to Vanderbilt for their doctoral training because we

81 are seen as the leader in their particular area of interest. While individual greatness, wherever it

82 occurs, will be supported, we cannot have leading graduate programs in every area. Yet in the

83 selective areas we choose to emphasize – those areas where we already have considerable

84 strength, capacity, and mission alignment -we can be world-class, second to none. By

85 refocusing departments and leveraging the strength of selected programs, facilitated by the

86 establishment of trans-institutional programs, excellence in graduate education across the

87 institution will spread and reach all faculty.

88

89 In using the term "intellectual leader," we do not refer just to people who will become

90 recognized faculty members at our peer institutions, although that is certainly an objective. For

91 us, this concept is more inclusive. We include diverse individuals who will become discoverers

92 in science and engineering; decision-makers in government and the policy community; or

93 motivators for social change. These individuals will author the next great novel or the latest

94 revolutionary patent. They will renew our nation's schools or forge the next medical

95 breakthrough. Their work will be seen as enhancing the human condition globally, and they
96 will be known as great communicators through their teaching and writings.

97
98 Simply raising Vanderbilt graduate education to the level of excellence attained in our
99 undergraduate and professional programs is not sufficient. Our vision is one where excellence
100 in graduate education casts a wide halo, so that our professional and undergraduate programs
101 are also strengthened and elevated. There is little doubt that enhancing graduate education also
102 will strengthen the undergraduate experience at Vanderbilt. Highly qualified graduate students
103 could be involved in residential colleges or in the undergraduate research initiative. Some
104 graduate students teach; the better these graduate students are, the better they will serve to
105 meet the educational needs of our undergraduates.

106
107 There is an urgent need to undertake this effort. Few of the university's graduate programs are
108 highly ranked; fewer still are in core areas where other top universities excel. Vanderbilt's
109 position in the top 50 research universities cannot be considered secure. Thus, achieving this
110 vision for graduate education at Vanderbilt will represent dramatic transformation.

111
112 To be realistic, we must allow ourselves time, patience, and persistence while navigating the
113 road to success. Greatness cannot be achieved through quick fixes or working around the edges
114 of a problem. Strengthening our graduate programs, initially targeting for national prominence
115 a few within each school, will require cultural change. In the end, however, Vanderbilt will
116 become known as a great research university. As this report makes clear, we have the will and
117 the capacity to achieve this goal.

118
119 **Creating a New Culture of Graduate Education at Vanderbilt**

120
121 Vanderbilt has an outstanding faculty, and continuing to build outstanding faculty is key to
122 enhancing graduate education and Vanderbilt's national stature. Indeed, indices for a
123 successful graduate program are faculty scholarship and creativity, as well as the critically

124 evaluated quality of their products. Yet graduate student quality and graduate placement,
125 some argue, are the most reliable indicators of the quality of a given graduate program in a
126 large number of fields. In this regard Vanderbilt falls behind its peer institutions. In aggregate,
127 Vanderbilt's graduate students, as well as the graduate education environment in which they
128 become immersed, need to become on par with the University's exceptional faculty or even the
129 quality of its undergraduate students and programs. While in the last few decades the quality
130 of faculty increased rapidly, this growth was not paralleled in our graduate students and
131 graduate programs and certainly not uniformly. Consequently, there is a developmental lag.
132 Below we discuss how to close the gap and make recommendations for creating a similar
133 cultural change for graduate education as has been produced in faculty quality, while
134 continuing to build an award-winning faculty.

135

136 **Challenging Talented Individuals is the Key to Success – Talent Development**

137

138 Vanderbilt needs to do a much better job of attracting the most talented graduate students,
139 students with passion and drive. Talent identification (or selection and recruitment), while
140 absolutely critical, becomes an empty proposition if not coupled with high expectations and a
141 top-notch talent development process. Such a process challenges students, capitalizes on their
142 talents and brings them to fruition, and enables students to follow their passions and dreams.
143 The challenge is to redesign the graduate experience at Vanderbilt in order to create such an
144 environment. Creating a new culture of graduate education will involve providing rich and
145 varied opportunities to students as they transform themselves into future intellectual leaders.
146 It will involve having faculty of renown also teach and train graduate students well, treating
147 them as students, not as employees. The desired outcome of a Vanderbilt graduate education is
148 a future intellectual leader.

149

150 We know what that outcome looks like for we are hiring these kinds of graduates here as junior
151 faculty members. It is a known quality. Thus, the goal can be operationalized and made
152 concrete. Vanderbilt's culture of graduate education should enable graduate students to build a

153 curriculum vitae (CV) that is on par with the junior faculty we are hiring, albeit at an earlier
154 developmental stage (i.e., before any post-doctoral experience). This necessitates a shift in
155 focus, away from obtaining the actual degree. The doctoral degree is simply something
156 students receive on their way, just like a master's degree. The goal is for students to develop
157 CVs that will launch their careers.

158
159 What is the process that leads to a CV that launches a career? The literature is clear on that
160 point. It is accomplished through what Harriet Zuckerman first labeled as the multiplicative
161 effect of the accumulation of [educational] advantage. This process begins when the
162 environment detects a talented individual and then responds by providing an opportunity for
163 that individual to develop, in this case via entry into graduate school. If the individual not only
164 responds to the invitation but responds well to the challenge presented, this results in the
165 individual standing out even more. This increases the probability that even more opportunities
166 are presented to the individual. Again, if the individual responds well to them, this makes the
167 person stand out even more and further opportunities come his/her way. Thus, the cycle of
168 talent development necessary for eminence is born. It operates in an iterative and
169 multiplicative fashion, having a "snowball" effect on the person's development.

170
171 Vanderbilt's challenge, therefore, is to create opportunities in its environment that attract
172 talented students and begin the talent development process. This must be followed by
173 successive instances where students are engaged to maintain them on a steep developmental
174 path. We argue that this needs to be the guiding principle for the redesign of graduate
175 education at Vanderbilt.

176 177 **Encouraging Structural and Environmental Change**

178
179 A corollary to reorienting graduate education around talent development is to require change in
180 the structure of graduate education itself. We tend to be far too prescriptive at Vanderbilt. This
181 tendency possibly developed in response to too many students being perceived as weaker than

182 they should be. Yet truly talented individuals whom we will be recruiting do not want to be
183 constrained and do not require rigid structure. They chafe under such conditions. Within
184 reason, truly first-rate students need to be allowed to become active in shaping their own
185 development and afforded considerable flexibility. Thus, we need to worry less about the
186 collection of prescribed courses and credit hours required for a degree than is currently the
187 norm. Formal course-work is necessary but not sufficient for producing high quality Ph.D.s
188 (and much of that should be accomplished in the first two years). Rather, we need to place our
189 emphasis on providing individualized experiences and enhancing the scholarly apprenticeship
190 experience with the major professor(s). The apprenticeship is where formative and critical one-
191 on-one interactions take place and students develop their professional identity as well as their
192 scholarly taste, standards, and self-confidence. It is through the apprenticeship that a graduate
193 student is transformed into a colleague upon completion of graduate studies.
194 Yet, while the apprenticeship (also discussed below) is critical in shaping the future intellectual
195 leader, and it tends to be a close one-on-one relationship, the emergence of true excellence
196 requires that the whole community shape and nurture the development of its very top graduate
197 students. While being too prescriptive or program specific in our approach, Vanderbilt has, at
198 the same time, often taken a hands-off approach with its graduate students in regard to
199 mentoring. Graduate students need to take courses from or share experiences with the great
200 faculty within their domain, broadly construed, even if that means going to another department
201 or college. Moreover, departments and colleges should be aware of their "diamonds in the
202 rough," and all should be active in helping those individuals of "star potential" attain their
203 promise. It takes all of Vanderbilt's rich pool of talent to provide the opportunities that create
204 the type of graduates we seek.

205
206 Moreover, there is also a need to construct an environment where fellow graduate students play
207 an active part in the socialization process of turning a beginning student into an "intellectual
208 leader" and colleague who will begin his/her career, perhaps after a post-doc, at a peer
209 institution or another appropriate setting. In schools, it is known that peers constitute a
210 powerful force in shaping achievement behaviors, and this is certain to hold for graduate school

211 as well. Graduate students should hold high expectations for each other and not provide
212 excuses for behaviors that are not career advancing. Students who are not making sufficient
213 progress must be dropped or counseled out.

214

215 Excellence in graduate education at Vanderbilt will emphasize not only research and discovery
216 but also the ability to communicate in teaching, publication, and non-traditional forms of
217 disclosure. Vanderbilt's graduates will be known as highly effective representatives of their
218 disciplines. That should be our trade-mark.

219

220 Finally, while graduate student satisfaction with quality of life and related issues has a tenuous
221 relationship with their development as "intellectual leaders," we nonetheless need to do what
222 we can to ensure that our students feel well cared for and nurtured. It is simply the right thing
223 to do. Graduate students also need to have their educational needs take priority.

224

225 Strategies follow from the above premises and principles for changing the culture of graduate
226 education at Vanderbilt. The following strategies are recommended for implementation by
227 programs, schools, and within central administrative structures where appropriate. Individual
228 graduate programs will implement these strategies in different ways, but we anticipate that all
229 of the strategic elements will be present in every program.

230

231 *Strategy: Continue the recruitment of nationally eminent faculty.* Faculty distinction, on a national
232 level, is almost entirely due to the published results from various types of inquiry and criticism
233 or from creative work. A highly distinguished faculty is a highly productive one, and they
234 attract quality graduate students as well as provide the challenging environment to train
235 intellectual leaders.

236

237 *Strategy: Ensure that faculty members have sufficient time to invest in graduate education.* Graduate
238 education, if done well, is time intensive. Yet, faculty members are expected to perform many
239 other functions, and our institutional commitment to undergraduate education cannot be

240 compromised. Thus, to enhance graduate education at Vanderbilt, we should consider
241 expanding the size of the faculty, especially in those program areas identified for enhancement.

242
243 *Strategy: Launch a study to address the policies of the University that bear on its efforts to enhance the*
244 *level of faculty engagement and scholarship that is at the heart of graduate education.* Some of the
245 issues to be considered are:

- 246 A. Criteria for promotion that recognize the different kinds of contributions and
247 achievements that will be found in the faculty that constitute the broader vision of
248 Vanderbilt, including excellence in graduate as well as undergraduate education.
- 249 B. Criteria for membership in the graduate faculty
- 250 C. Administrative policies that address the requirement for protected time for faculty to
251 pursue scholarly endeavors.
- 252 D. Strategies for recruiting and retaining outstanding senior scholars

253
254 *Strategy: Emphasize graduate supervision when assessing faculty for promotion and in annual salary*
255 *reviews.* A broader definition of teaching that goes beyond student ratings of performance in
256 formal courses is required. Graduate supervision and mentoring should be evaluated and
257 counted as part of teaching, using quality indices that go beyond sheer number of students
258 supervised (e.g., interviewing graduate students in their final year, inspecting and holding
259 faculty accountable for graduate students' CVs). Moreover, we should recognize that, just as
260 for scholarship, there are many ways to demonstrate excellence in teaching and that to be
261 considered an excellent teacher does not necessitate being superior in every facet of teaching.
262 Some can demonstrate excellence through graduate education, while others, for example, might
263 demonstrate their excellence in their work with undergraduates. We should not have a "one
264 size fits all" model of assessment. Also, reward faculty for producing high quality doctorates
265 with strong CVs.

266
267 *Strategy: Create incentives for faculty to support their graduate students through grants and fellowships*
268 *in fields where this is viable.* Many faculty would prefer hiring a post-doctoral fellow rather than

269 support two graduate students, believing that a post-doc helps advance their own research and
270 careers more. This, at times, has a negative effect on graduate education and Vanderbilt's
271 ability to elevate its national standing. To be clear, we realize that post-docs contribute to the
272 intellectual community and are a critical element in the overall graduate experience. In many
273 labs they are in the best position to provide some of the needed mentoring and supervision of
274 graduate students. Faculty should be able to benefit from the contributions post-doctoral
275 fellows make. The concern arises when this strategy is taken to extremes and post-docs are
276 supported at the expense of graduate students. There needs to be a balance, and to achieve this
277 balance we must ensure adequate incentives for faculty to do their part in supporting graduate
278 students through grants.

279

280 *Strategy: Conduct annual evaluations of graduate student progress.* At least once a year graduate
281 students need to be evaluated by the whole faculty or a group broadly representative of the
282 faculty in a program (possibly using an external member), with feedback generated to the
283 students. The evaluation should go beyond course-work and time-in-program indicators and
284 include assessment of progress in research and in their development as scholars. This must be
285 done in a way that allows assessment of students' capabilities independent of their mentor.
286 Thus, annual evaluations might include presentations by the students if they are advanced in
287 their program. Yet, it is critical that the emerging CV of each graduate student, in particular, be
288 examined annually by the faculty committee to provide recommendations for further growth.
289 If serious problems are uncovered by the evaluation, then the department chair needs to be
290 notified and appropriate action taken. Concerns and means of addressing them must be
291 communicated to the student in writing.

292

293 *Strategy: Create a more flexible and distinctive curriculum.* Graduate students must achieve
294 competence in their discipline and be able to connect to the field. Achieving those goals has to
295 be the guide to setting requirements. Yet, we urge faculty to provide as much flexibility as
296 possible in course selection for students and to be creative in how they count hours or package
297 courses. The fewer courses students take, the more time they have to achieve in their remaining

298 courses and in their research. As well, we sense the need to make our curricula more
299 distinctive. We recommend that the associate provost for graduate education share with deans
300 and directors of graduate studies (DGSs) examples of innovative programs and procedures.

301
302 *Strategy: Train graduate students to be not only consumers but producers of knowledge.* This demands
303 that faculty teach to the creative potential of students and provide reinforcement, rewards, and
304 feedback that strengthen individual and collaborative research by graduate students. Students
305 with exceptional progress should be identified early and supported and encouraged to conduct
306 impactful research and to publish, quite apart from and before undertaking their Ph.D.
307 dissertations.

308
309 *Strategy: Provide more research assistantships to students, including some that are "duty-free," so that*
310 *students can develop their research interests and abilities.* To develop the type of "intellectual
311 leader" we seek, students need opportunities to work unfettered on research projects that could
312 advance their careers. We propose a three-pronged approach. (1) In some disciplines, faculties
313 obtain grants that support graduate students to work as research assistants. This needs to be
314 encouraged (as noted above), and faculty efforts to obtain such funds should be supported and
315 rewarded. Yet, not all disciplines can compete for such monies and not all research
316 assistantships enable students to develop their own unique potential. Thus, (2) each college
317 should provide research assistantships on a competitive basis. As well, (3) special research
318 assistantships need to be created for students where the student's own ideas and interests are
319 the drivers, not the needs of a particular faculty mentor. This would be a distinctive type of
320 research assistantship not found in many schools and would work as follows. If a talented
321 graduate student has developed an exciting idea, funding would be provided, on a competitive
322 basis, to the students themselves, not through professors, to enable them to work with faculty
323 members or in settings of their choosing to develop this idea into a scholarly product. This
324 would allow the student to take existing research in a new direction or to apply concepts in one
325 area to another. It would allow them to participate in a different lab (at Vanderbilt or
326 elsewhere), work within industry, or align with a project that could be seen as enriching. The

327 students are, thereby, enabled to create their own scholarly niche or unique set of experiences
328 that follows their passions. It allows Vanderbilt not only to recognize but to honor and
329 capitalize on the truism that there are many different avenues for obtaining success.

330

331 *Strategy: Provide small research grants to graduate students.* Conducting quality research requires
332 money. Sometimes such funds can and do come from faculty grants. Yet, not all students have
333 access to such funds or, in some cases, their research does not fall within the parameters of an
334 available grant. Schools need to set up competitive funds to ensure that quality of graduate
335 student research is not compromised.

336

337 *Strategy: Provide ample and varied opportunities for graduate students to develop their teaching and*
338 *presentation skills.* In collaboration with the Center for Teaching, colleges/schools or
339 departments should be required to develop programs that prepare our graduate students to
340 become excellent teachers and communicators, particularly if their career objectives fall within
341 academia.

342

343 *Strategy: Encourage students to apply for fellowships and other grants and support them in doing so.* A
344 funded fellowship is not only prestigious but allows the student to focus more on his/her
345 scholarship. Even obtaining a simple travel grant is a CV-enhancing activity and promotes
346 student development. Yet, regardless of actual success, the experience of applying for grants is
347 itself educational. Support structures need to be developed, therefore, within each department
348 to assist students in this process and to encourage this expectation. Moreover, preparing a
349 research grant proposal may be an effective project for a graduate class, perhaps more than
350 writing a paper on some specified topic.

351

352 *Strategy: Promote more conference participation among graduate students.* Attending and
353 participating in conferences is especially valuable for inducting graduate students into their
354 professional career. Presenting papers or posters is especially beneficial and, thus, more
355 support for such activities must be provided. And, for beginning students, participation in key

356 conferences is critical in shaping their professional identity and enthusiasm. It makes them feel
357 part of a bigger agenda or mission. It also helps set high expectations and standards. Thus,
358 funds for travel should not be limited to students who make presentations as that precludes all
359 beginning students, some of the very people who need to learn how presentations are offered *in*
360 *situ*. Programs and schools should build such funds into their budgets.

361
362 *Strategy: Accommodate the reality that a Ph.D. degree stopped being a 4-year process many years ago.*
363 Schools need to provide guaranteed 5-year assistantships (if a person enters with only a
364 bachelor's degree), with opportunities for a 6th year of support.

365
366 *Strategy: Include components that support graduate education in the interdisciplinary research efforts*
367 *funded by the Vanderbilt Academic Venture Capital Fund.* Each interdisciplinary research center
368 provides a rich intellectual community in which to immerse graduate students and educate
369 them. Centers should be accountable for capitalizing on this. Thus, funds within these centers
370 need to be dedicated in part to graduate education and specific plans developed for insuring
371 that this investment in faculty research also enhances graduate education.

372
373 *Strategy: Diversify and internationalize the scope and content of graduate course-work and research*
374 *training opportunities.* Recognizing that we live in a global society, many students need
375 exposure and in-depth experiences that include other cultures and societies. (1) Students need
376 access to funds to enable them to present at international conferences and (2) to conduct
377 research in international settings, possibly through partnerships that involve field schools in
378 some disciplines or internships in international labs in other disciplines. (3) Bringing
379 international conferences, faculty, or students to Vanderbilt is another mechanism. And, (4) to
380 diversify the graduate experience, we recommend the establishment of several honorary
381 distinguished visiting professorships to bring outstanding minority professionals to campus for
382 one semester or a year during which time they could lead seminars or involve graduate
383 students in their research.

384

385 *Strategy: Make scholarly ethics a component of every student's graduate experience.* Discussions about
386 IRB and animal care issues, including how to navigate the approval processes, need to become
387 embedded in the graduate education process. In some programs, a specific course may be
388 required. For others, these issues may be infused into the regular curriculum.

389

390 *Strategy: Create more professional development opportunities.* The focus on constructing a strong
391 CV should not occur at the end of the graduate experience, when it is almost too late, but at the
392 beginning of graduate school and throughout the program. Thus, faculty should meet with
393 their students periodically throughout their training to ensure that graduate students are
394 engaging in the types of activities that are career enhancing. The emerging CV always should
395 be the focus. When the time comes and the CV is ready for students to take to market, faculty
396 need to provide concrete advice to students on how to conduct a job search and how to
397 interview, including advice on such mundane matters as appropriate dress and how to comport
398 themselves. Students should not only be required to do practice job talks but be given coaching
399 throughout the process. As well, departments need to take active responsibility for successfully
400 placing their graduate students and be held accountable for their success.

401

402 *Strategy: Enhance graduate student satisfaction by making certain that the needs of graduate students as*
403 *students take priority.* Obviously, providing an excellent and rigorous graduate education is
404 pivotal in ensuring graduate student satisfaction, as is providing good stipends and benefits. In
405 regards to the latter, Vanderbilt must become more competitive. There are other tactics that
406 ought to be explored. (1) Departments need to ensure that students are not asked to make
407 significant compromises in their own educational development to meet teaching or grant-
408 related needs. The issue here is not that no compromise should ever be allowed but rather one
409 of appropriate balance. (2) Exit interviews and surveys of current students and alumni should
410 be conducted to identify areas where we can make improvements. And (3) we need to provide
411 opportunities for socializing with faculty and other graduate students.

412

413 *Strategy: Target selected programs for enhancement.* While we can do much to change the culture
414 of graduate education throughout Vanderbilt University, progress in elevating the stature of
415 Vanderbilt's graduate education programs also should be done through a selective process
416 within each school. That is, the goal is to raise both the mean and "lift the top" in graduate
417 education. Resources, after all, are insufficient within schools or even across schools to invest in
418 all graduate education programs simultaneously and expect a large rise in quality. In the
419 selected areas chosen for emphasis—those areas where we already have considerable strength,
420 capacity, and mission alignment, the goal is to become world-class. We must acknowledge,
421 however, that for some areas, the aim will be to refocus the department and leverage the
422 strength of selected programs in order to allow excellence in graduate education to develop.
423 Thus, for those graduate programs that are to be de-emphasized, deans need to work with their
424 affected faculty to develop strategies for ensuring access to graduate students. Emerging
425 interdisciplinary research programs may serve as a venue for such access.

426
427 *Strategy: Develop compelling answers to the prospective student's question, "Why should I study at*
428 *Vanderbilt?"* Every graduate program should be capable of answering this question in a manner
429 that reflects the reality and aspirations of the program.

430
431 *Strategy: Create a communications plan that elevates the standing and visibility of graduate education at*
432 *Vanderbilt.* Inspection of current communication efforts at Vanderbilt (e.g., the *Register*, Web-
433 pages) yields few examples of where graduate students and graduate education are the focus.
434 Graduate education is almost invisible. That needs to be corrected. And, we need to do a better
435 job of showcasing how research can make a difference.

436 437 **Apprenticeship: Mentoring Graduate Students to Unlock their Creative Potential**

438
439 Potentially the most formative experience during graduate school for a future intellectual leader
440 is the close relationship that often develops between a graduate student and a mentor (or
441 mentors) within the apprenticeship portion of graduate education. The significance of this

442 relationship is captured in the frequent reference to the mentor(s) in graduate school, typically
443 the major professor is primary, as the individual's academic or professional parent (or parents).
444 No other mentoring relationship (and eminent individuals often have several in the course of a
445 lifetime) has the potential to be as deep, as lasting, or as important as this first one. Indeed,
446 when this relationship goes awry or is absent, there are negative impacts on the student's
447 development, and eminence becomes much harder to achieve.

448 Through the apprenticeship and mentoring received in the research training environment,
449 graduate students develop their scientific tastes – a preferred methodology; a particular
450 theoretical or conceptual lens; a characteristic form of argument; one's values, standards, and
451 scholarly ethics; and other research related outcomes. Through the apprenticeship, graduate
452 students experiment with and eventually acquire their initial professional identity, which
453 matures over a lifetime.

454

455 Because the mentoring role is so important, it is useful to define concretely the functions a
456 mentor fulfills. The mentor facilitates the process of accumulating educational and career
457 advantage, serving as a role model, providing support, direction, and feedback to graduate
458 students regarding career plans, publication opportunities, and interpersonal development. To
459 be more specific, the career functions that a mentor provides, as delineated by Noe (1988)
460 include: nominating or identifying the protégé for desirable projects or assignments such as
461 writing chapters, journal articles, or conference participation and helping them learn and
462 benefit from the experience (i.e., sponsorship); providing the protégé with assignments that
463 increase visibility to decision-makers and exposing them to future opportunities; sharing ideas,
464 providing feedback, and suggesting strategies for accomplishing research objectives and
465 publication goals (i.e., coaching); reducing unnecessary risks that might threaten the protégé's
466 reputation (i.e., protection); and providing challenging research assignments and opening the
467 door to publication (i.e., challenge and setting expectations).

468

469 Yet not all functions of a mentor fall in the realm of career advancement. There are also some
470 specific psychosocial functions of a graduate mentor – to enhance the protégé's sense of

471 competence, identity, and work-role effectiveness (Noe, 1988). This is effected through the
472 mentor serving as a role model of appropriate attitudes, values, and behaviors for the protégé;
473 conveying positive regard, acceptance, and confirmation as well as setting expectations for
474 productivity and quality of work; providing a forum in which the protégé is encouraged to talk
475 openly about anxieties, fears, and plans (i.e., counseling); and interacting informally with the
476 protégé in the work environment (i.e., friendship). Evidence indicates that the greater the
477 number of functions provided by the mentor, the more likely the relationship will be beneficial
478 to the protégé.

479

480 Unfortunately, more graduate students have advisors than have mentors in graduate school,
481 and this may be the case at Vanderbilt. Yet the formation of intellectual leaders is greatly
482 facilitated when students have mentors. Because of its deep developmental significance, we
483 provide a set of specific strategies for ensuring that the apprenticeship experience and the
484 mentoring therein are positive and successful. We also provide strategies for how all faculty
485 can develop the mentoring functions discussed above that they then display with all of their
486 students.

487

488 *Strategy: Ensure that all graduate students have at least one quality mentoring experience.* This is
489 especially critical for those with the most potential to succeed where often several mentors can
490 be identified. Thus, admissions into doctoral studies must be limited so as not to tax the ability
491 of faculty members to provide quality mentoring. We simply cannot have faculty take on too
492 many students and then compromise these relationships in order to cope.

493

494 *Strategy: Ensure that graduate students have and feel that they have a choice in selecting a mentor or*
495 *mentors.* Students often come in with a temporary advisor, or their interests change after
496 program entry, necessitating a change in who becomes their mentor. Students should feel free
497 and even encouraged to find the mentor or mentors who have the necessary expertise and
498 attributes required for forming a successful mentoring relationship. Students must be able to

499 follow their passions and should be empowered to seek mentoring relationships that provide
500 positive benefits. Doing otherwise is counter-productive.

501
502 *Strategy: Reward faculty for their mentoring of graduate students.* Promotions and salary increases
503 should be partially based on a faculty member's engagement and performance in mentoring.
504 This can be judged through exit interviews, surveys, and performance of graduate students
505 (e.g., their CV at graduation and placement). We should reward as many of the specific
506 mentoring functions, delineated in the above narrative, as possible.

507
508 *Strategy: Create an Award for Excellence in Graduate Mentoring.* While Vanderbilt has awards to
509 recognize excellence in research and in teaching (usually limited to classroom teaching), there
510 are no awards that specifically recognize excellence in mentoring. The individuals thus
511 recognized should be drawn upon to develop programs of professional development to faculty
512 in the area of graduate mentoring.

513
514 *Strategy: Create training programs for faculty to help them become excellent mentors.* By drawing
515 upon the talents of faculty who are excellent graduate mentors, we will expand the sphere of
516 excellence in graduate mentoring through, for example, graduate mentoring circles, roundtables
517 with DGSs, and training of junior faculty. Professional development opportunities should be
518 made widely available and participation strongly encouraged. At minimum, faculty need to
519 learn what are the functions served by successful mentors and, then be given the necessary
520 supports to adopt these functions in their interactions with graduate students.

521
522 *Strategy: Strongly encourage self-assessment by graduate programs, using available measures, to learn*
523 *how well they are fulfilling their role in mentoring graduate students.* There are instruments available
524 to assess advisor-advisee or mentoring relationships that could be adapted for use (Noe, 1988;
525 Schlosser & Gelso, 2001). We recommend only that information be obtained by deans on a
526 department's or program's overall performance, not the performance of individual faculty

527 members. Whether departments/programs subsequently take the assessment down to the
528 faculty level is a matter of choice.

529

530 *Strategy: Ask graduate programs to ensure that a strong apprenticeship experience is a critical*
531 *component of each department's graduate experience.* In some programs, the apprenticeship, which
532 provides the research training environment, is too short or compromised in some other way to
533 serve its scholar-forming function. As well, relevant support structures, facilities, or equipment
534 may not be available to provide a rich research training experience and for the full benefits of
535 apprenticeship to emerge. Alternatively, graduate students may be spread too thin, with
536 competing demands that make them unable to benefit fully from the apprenticeship.

537

538 *Strategy: Ask the director of graduate studies to foster quality graduate mentoring and to serve as a back-*
539 *up mentor in each department.* DGSs need to visit with graduate students on a regular basis and
540 should function as the go-to-person if there is a serious problem with a mentor, classes, etc.
541 Department chairs or deans need to empower DGSs by giving them sufficient autonomy and
542 authority. As well, DGSs need to meet on a regular basis, within excellence circles, to share
543 ideas and concerns and to ensure the development of high quality programs. They need to be
544 the central figures in ensuring that quality mentoring occurs in their programs. Mentor award
545 winners could be useful contributors to and facilitators of such meetings.

546

547 *Strategy: Focus the apprenticeship on the experiences necessary to launch a career.* The mentor and
548 protégé should focus on customizing research training experiences and developing a record of
549 accomplishments, as captured in a CV, which will enable the protégé to launch a successful
550 career in the direction of his or her dreams.

551

552 *Strategy: Separate the creation of a dissertation and associated advisement from the dissertation*
553 *evaluation.* In some universities, the dissertation committee is not known until the end of the
554 program. At other universities, it is required that the committee has not worked with the
555 student at all. We believe that, while the committee working with the student to develop a

556 dissertation must have the necessary expertise, it might be useful if a different group or a
557 somewhat expanded group evaluated the final product.

558

559 *Recommendation: Departments or programs should look to the procedures listed below to ensure that the*
560 *above strategies are implemented.*

- 561 1. Establish the mentoring expectations for a department or program.
- 562 2. Have the DGS serve as an active second mentor to students.
- 563 3. Provide dual mentors where appropriate.
- 564 4. Establish a committee that meets regularly to assess the quality of mentoring that
565 candidates are receiving and the program provides.
- 566 5. Prepare an annual mentoring report to be submitted to the dean.

567

568 **Graduate Education and Trans-institutional Initiatives**

569

570 The University's Strategic Plan emphasizes trans-institutional initiatives as a means of
571 leveraging existing strengths to address new areas of research and discovery. Trans-
572 institutional initiatives, understood this way, are all related to research, scholarship, and
573 graduate education. It is, therefore, essential that every Academic Venture Capital Fund-
574 supported initiative be evaluated for how it aims to affect the improvement of graduate
575 education, a strategic priority of the University. Not all of our trans-institutional initiatives,
576 however, are funded out of the Academic Venture Capital Fund. It is important then to attend
577 to the ways that existing and future collaborations can help foster an intellectual culture
578 conducive to graduate education and serve as a resource for those faculty with no access to
579 graduate students.

580

581 In reviewing some of the existing forms of collaboration while trying to derive lessons about the
582 structure of graduate education in an era when increased emphasis is being placed on
583 interdisciplinary study, it is our strong conviction that decanal and program accountability
584 needs to be maintained so that graduate students are well served by lasting and firm

585 commitments. In this respect, the Interdisciplinary Graduate Program (IGP) in the School of
586 Medicine is one model for how faculty from separate entities can work together to educate
587 graduate students at Vanderbilt. In this instance, faculty from the biological and medical
588 sciences participate in the education of graduate students but the accountability for the finances
589 and student progress in the program rests on the Medical School. The Graduate Department of
590 Religion has likewise involved Arts and Sciences faculty for more than 40 years while placing
591 financial accountability for the program in the Divinity School.

592 Can graduate students be admitted to study in centers or institutes? We think not. By long-
593 standing arrangement, new graduate programs require Faculty Senate approval, approval that
594 is based among other things on the ability of units to guarantee the resources necessary to
595 deliver the graduate program. More importantly, joint ventures are often by their nature
596 temporary efforts to get something going that has not existed heretofore. They are funded for a
597 definite period of years, based on the belief that the research initiative will prove its potential
598 during that period (or not) and thus qualify for long-term regular funding (or not) during that
599 period. If the Academic Venture Capital Fund is doing its work investing institutional funds on
600 promising initiatives but also ones that cannot be guaranteed, then some of those initiatives will
601 not succeed in becoming permanent. Graduate students admitted to this University deserve a
602 commitment from a graduate program that they will be able to complete the program if they do
603 their part. The University needs to do its part to assure that there will be no orphan programs
604 or orphan graduate students.

605

606 *Strategy: Give every graduate student a firm institutional home.* Until the time when an
607 interdisciplinary program has achieved permanence, any graduate students involved in the
608 work of centers ought to be based in a specific existing graduate program just as multiply-
609 appointed faculty have a home appointment. Preexisting graduate programs should be
610 encouraged to make appropriate modifications in the structures of their programs to take
611 maximum advantage of the opportunities afforded by the existence of the new programs,
612 centers, and institutes. In sum, we strive to provide both the security of achieving disciplinary

613 competence and an institutional home and the exciting opportunity to work at the frontiers of
614 knowledge and discovery.

615
616 Almost by definition, investigators involved in centers and trans-institutional initiatives, both
617 those specially funded and those conducted without extraordinary support, are doing
618 something new and unusual. They are the kind of individuals who should serve as models and
619 mentors for graduate students beginning careers of research and discovery. Taking advantage
620 of such opportunities is discussed separately for (a) the humanities and social sciences and (b)
621 the sciences and engineering.

622

623 The Humanities and Social Sciences

624 In the humanities and social sciences the opportunities lie in two areas: the first is in soft-money
625 funded research.

626

627 *Strategy: Encourage graduate students to involve themselves in the work of trans-institutional initiatives*
628 *and seek external support where appropriate.* These opportunities will differ from field to field and
629 the entire University community needs to be aware that the opportunities for funding graduate
630 students in the humanities from external sources are quite small. Nevertheless, we need to do a
631 better job of encouraging students and faculty to pursue external sources of funding, which in
632 the humanities and social sciences are often linked to issues of career advancement and
633 visibility.

634

635 The second area of opportunity for graduate students in the humanities and social sciences
636 ought to be more widely available and that is the chance to become a liberally educated and
637 informed specialist. It is said that the best researchers are those who dig deep holes, while the
638 best teachers are often able to plow vast fields. The implication of this saying is that the two
639 aims of graduate education – teaching and research – are in fundamental tension. The most
640 interesting and useful scholars in the humanities and social sciences, however, manage to dig
641 deep holes into fields of research, but to do so on questions that are of interest and importance

642 to others outside those immediate fields. Becoming a person who is wise in moving between
643 fields, in knowing the status of fundamental questions and perspective in fields of humanistic
644 and social scientific inquiry should begin in graduate school, if it has not begun earlier.
645 Knowing how to re-combine approaches to attain advances in knowledge is one characteristic
646 of the well-educated scholar.

647
648 *Strategy: Create opportunities for interdisciplinary study working groups for graduate students and*
649 *faculty.* Vanderbilt needs to learn from universities such as the University of Chicago and the
650 University of Toronto, which have leveraged strengths in multiple fields to create a culture of
651 intellectual curiosity and shared conversation. Indeed, the beauty of a private Research I
652 university of Vanderbilt's size in the social sciences and humanities is that vital questions of
653 human social relevance can be addressed by scholars from multiple fields who nevertheless
654 know one another and are able to make efforts to translate between field-specific languages and
655 between academic discourse and that of the general public. For this to happen more effectively,
656 colleges and schools at Vanderbilt must look for ways that they can turn their separate strengths
657 to common advantage and to offer these strengths to the graduate students who are the future
658 professoriate. To provide this environment to graduate students, deans, with central support
659 and encouragement, should begin working groups on vital questions that do not belong solely
660 to one field of study. The range of such topics is wide and includes, for example, children,
661 violence, race, and global development. Such working groups would deliberately involve
662 graduate students and faculty from across the university, including schools like Law that may
663 have something to contribute to the questions and thus to graduate education, even though the
664 school does not itself host a Ph.D. program in that area.

665
666 The Sciences and Engineering

667 Unlike the humanities and social sciences, most of the opportunities in the sciences and
668 engineering lie in areas that can seek federal or industrial support and, indeed, a reasonable
669 expectation is that graduate students in the sciences and engineering not supported by training

670 grants, fellowships, or teaching assistantships should be supported from externally won sources
671 of research funding.

672

673 *Strategy: To enable students to participate in the funded research possibilities offered by trans-*
674 *institutional initiatives, streamline the processes that now result in missed opportunities.*

675 The University needs to work to facilitate the efforts of the faculty winning external research
676 funding by continually improving the research administration, accounting, purchasing, and
677 human resources systems with which these faculty members must interface to be successful.
678 Administrative burdens too often result in faculty failing to pursue programs that would
679 improve graduate student support.

680

681 In the sciences and engineering, a wide variety of interdisciplinary cooperative and
682 collaborative work is underway. An example is the Interdisciplinary Graduate Program in
683 Materials Science that draws faculty from physics, chemistry and a number of engineering
684 disciplines. Another example is the Center for Integrative and Cognitive Neuroscience, which
685 draws on faculty and resources from throughout the University. New programs in areas such
686 as biophysics/bioengineering and nanoscience/nanoengineering also are emerging as
687 opportunities for interdisciplinary work involving faculty and graduate students cutting across
688 numerous disciplinary boundaries.

689

690 *Strategy: As a relatively small, research intensive university, particularly in consideration of the*
691 *resources available in the sciences and engineering, Vanderbilt must seek ways whereby the colleges and*
692 *schools can turn their separate strengths to common advantage. This is the only way in which*
693 *Vanderbilt can reach new levels of national and international recognition in these fields. And,*
694 *by doing so, Vanderbilt will strengthen its position in recruiting excellent graduate students as*
695 *well as in providing state-of-the-art challenges in research and scholarship for these students.*
696 The Provost's Office should continue to encourage and facilitate opportunities for
697 interdisciplinary and trans-institutional efforts in the sciences and engineering.

698

699

Part Two: Challenges, Commitments, and Measurable Goals

700

701

702 In realizing its goals for positively transforming graduate education, Vanderbilt will face
703 challenges. The challenges of obtaining the best students and then guiding them through the
704 best programs that can be devised and offered necessitate a commitment to a new, active
705 program of recruitment, especially amongst international students and students from racial and
706 ethnic groups under-represented in the contemporary academy. It also will require new
707 commitments to evaluation, to data collection for tracking student progress, to benchmarking
708 measurable program goals and, consequently, to an ethos of continuous program development.

709

Recruitment

711

712 Implementation of the recommendations presented in other sections of this report will
713 reinvigorate and strengthen graduate education at Vanderbilt University; however,
714 administrative and programmatic reforms will not, by themselves, yield adequate enrollments
715 of highly qualified and diverse pre-doctoral scholars. With declining enrollments in many
716 areas, we no longer can assume that students will come to us. Instead, the effective recruitment
717 of talented graduate students requires the coordinated efforts of each program's faculty, staff,
718 current graduate students, and alumni. With central support, and beginning with the
719 development of an understanding of its recruitment market, each program must exploit a
720 variety of strategies to publicize itself, make contact with prospective students, and cultivate
721 them through a series of communications that develop an increasingly personalized
722 relationship carrying the most promising individuals through the application process and
723 culminating in their matriculation.

724

725

726 **Staffing for Graduate Recruitment**

727

728 *Strategy: Include graduate recruitment coordinators in the staffing of the Office of the Associate Provost*
729 *for Graduate Education. Most individual programs lack the expertise and staff to undertake*
730 *graduate recruitment without the assistance of a suitable specialist; moreover, centralized*
731 *coordination of recruitment efforts can avoid needless duplication of activities and resources.*
732 *The graduate recruitment coordinator will oversee marketing research, help individual*
733 *programs develop recruitment plans, and coordinate recruitment activities that serve multiple*
734 *programs.*

735

736 **Understanding Our Market**

737

738 *Strategy: Commission a marketing study to guide the recruitment strategies of individual programs.*
739 *While the faculty of our graduate programs should aspire to the ultimate realization of a*
740 *national and international recruitment catchment, previous marketing surveys conducted for*
741 *the University's professional programs suggest that we are likely to find that many of our*
742 *graduate programs currently compete for students primarily within a geographic region*
743 *consisting of neighboring states that we cannot afford to ignore. In addition, we need to*
744 *understand better the priorities of prospective students in order to structure appropriately*
745 *communications in recruitment brochures and program Web sites as well as such direct*
746 *contacts as telephone conversations, letters, and e-mail messages. A comprehensive marketing*
747 *study conducted by a carefully selected external organization is, thus, an essential first step in*
748 *effective graduate recruitment.*

749

750 **Publicizing Our Programs**

751

752 *While those few Vanderbilt graduate programs that currently are highly ranked (e.g., by U.S.*
753 *News & World Report) receive resulting favorable publicity that attracts applicants, most of our*
754 *programs must find other ways to bring themselves to the attention of prospective students.*

755 *Strategy: Make sure that each of our graduate programs is effectively promoted on the World Wide Web.*
756 Most prospective graduate students are introduced to our programs by their Web sites. We
757 need to look at each program's Web site through the eyes of a prospective graduate student and
758 ask whether we promote the best features of our programs, whether we appear particularly
759 welcoming to graduate students, and whether we celebrate their involvement in research. Is the
760 program's site easy to navigate? Is adequate information about the scholarly interests and
761 activities of faculty included? Can students interested in an interdisciplinary program easily
762 find their way to relevant information? Does the site provide encouraging information about
763 financial aid? The creation and maintenance of graduate program Web sites is a crucial
764 responsibility of school deans.

765
766 *Strategy: Develop attractive brochures for promotion of graduate programs.* While Web sites have
767 become the most important tools for the dissemination of information to prospective students,
768 brochures remain useful for mailings and distribution at meetings. Working through the
769 Recruitment Coordinator (who ultimately will have to rely upon the schools to support
770 development costs), the Associate Provost for Graduate Education should help assure that each
771 of the University's graduate programs has an attractive and informative promotional brochure.

772
773 *Strategy: Use Educational Testing Service's GRE Locator Service to make contact with prospective*
774 *students.* For a modest fee the Educational Testing Service provides names and e-mail addresses
775 of persons (sorted by field, state, GPA, etc.) who recently have taken the GRE. Using these
776 addresses, programs could send letters or (less expensively) e-mail messages to prospective
777 graduate students who might not otherwise think of applying to Vanderbilt.

778
779 *Strategy: Develop feeder programs to identify talented prospective students from colleges and universities*
780 *in the United States and abroad.* The cultivation of relationships – both formal and informal –
781 with other institutions can provide local recruiters who will bring our programs to the attention
782 of outstanding prospective students who ordinarily would overlook Vanderbilt. The following
783 are examples of possible programs:

- 784 • Faculty Visits to Other Institutions. Where one of our graduate programs has shared
785 interests or long-standing contacts with colleagues at another university or college, we
786 should send faculty to discuss their research and information about our graduate
787 programs with prospective graduate students. Several of our programs have counted
788 on large numbers of talented Asian students, but increasingly other countries (Britain,
789 Australia, New Zealand, and Canada) are soliciting applications from these students.
790 As China develops its own graduate programs (as it is in mathematics), the deep pool
791 of talent will become more shallow. We need to look to South America and Eastern
792 Europe as sources of international students. When our faculty travel to foreign
793 universities to present their work, we should fund them for an extra day in order to
794 allow them time to speak to prospective students.
795
- 796 • Partnerships with Historically Black Institutions. Effective minority recruitment could
797 be accomplished through partnerships between Vanderbilt departments and
798 corresponding departments in historically black institutions. If, for example, Fisk
799 University departments were our partners, selected Fisk undergraduates could take a
800 Vanderbilt course (with a Vanderbilt-funded tuition scholarship) each semester of their
801 junior and senior years. In addition, we could provide paid research internships
802 during the summers following their junior and senior years. If they did well in the
803 courses they took as visiting students, if they maintained a stipulated GPA, and if they
804 successfully completed their first summer research project, we could guarantee their
805 admission to Vanderbilt without requiring them to present GRE scores. Such a
806 program would be small in size but significant if it forged productive department-to-
807 department partnerships.
808
- 809 • McNair Program. Dean Smith began the development of a relationship with the McNair
810 Program, a national effort that identifies talented minority undergraduates and
811 prepares them for eventual admission to graduate school. We need to continue to

812 work with that program, not only to obtain access to their mailing list, but also to bring
813 McNair fellows to the Vanderbilt campus to meet our faculty and graduate students.

814

815 • Summer Academy for Rising Seniors. Using the Medical School's Vanderbilt Summer
816 Academy as a model, we could invite talented undergraduates (rising seniors) to
817 Vanderbilt for a summer to work on a research project in a Vanderbilt laboratory or to
818 take part in a special seminar. If they produced impressive work, we might offer them
819 admission – contingent upon maintenance of their high GPA – and financial aid before
820 the regular recruitment season.

821

822 • Research Paper Competitions. In some fields, an award for the best undergraduate
823 research paper submitted in a nationally and internationally advertised competition
824 might be a useful experiment. If well publicized, the competition would identify
825 Vanderbilt's name with research in the minds of prospective students and would
826 provide a useful list of prospective students whom we could recruit.

827

828 *Strategy: Develop fifth-year masters programs.* Vanderbilt undergraduates are, in some fields,
829 superior to our entering graduate students. Accordingly, we should create selective BA/MA,
830 BS/MEd and BS/MS degree programs to tap this outstanding pool. Highly talented Vanderbilt
831 undergraduates would be encouraged to apply to such programs in their junior year and, if
832 admitted, begin taking graduate level courses in the senior year. After a fifth year, they would
833 graduate with a master's degree. This would be particularly attractive for small programs with
834 more faculty eager to teach graduate courses than there are current graduate students to fill
835 them. Such programs also would provide a source of revenue that could be applied to the costs
836 of improving graduate education. In addition (as Peabody College already has discovered with
837 its fifth-year MEd programs), the existence of fifth-year masters programs would enhance
838 undergraduate recruitment.

839

840 **Nurturing the Development of Contacts into Matriculants**

841

842 Having established contact with prospective graduate students, we need to develop an
843 increasingly personalized relationship with them through communications and events that
844 encourage them to apply, motivate them to complete the application process, and, if they are
845 admitted, to choose Vanderbilt for their graduate studies. To accomplish this, we should extend
846 the contact management capabilities of the recently-installed online application system, exploit
847 Web- and Internet-based communications, and involve faculty, staff, current students, and
848 alumni in face-to-face interactions with prospective graduate students.

849

850 *Strategy: Continue to waive the application fee for persons who apply online.* This year's waiver of the
851 application fee for persons applying electronically has dramatically increased the number of
852 applications for graduate study. They doubled. We should continue this policy.

853

854 *Strategy: Extend the contact management capabilities of the online application system to produce a*
855 *predefined sequence of communications to each prospective student.* Because the online application
856 system is built around a high-capacity Oracle database, it is quite feasible to produce
857 automatically, according to a predetermined schedule, a series of personalized e-mail messages
858 and letters (that would be different for each graduate program) to each prospective student in
859 the system. Database records should be created for prospective students as soon as they have
860 been identified (by their own inquiry or some other means) so that an initial sequence of
861 communications can encourage them to begin the application process. After individuals have
862 begun the application process, the next series of communications should exhort them to
863 complete their applications. Finally, persons who have received offers of admission should
864 receive communications designed to help them see the wisdom of choosing Vanderbilt over
865 other institutions to which they also have been admitted. In general, the sequence of
866 communications should be structured to build an increasingly personal relationship with each
867 prospective student, and relevant information should be provided with each message or letter.
868 For example, general information about Nashville supplied early in the process could help

869 overcome possible regional biases of persons from other parts of the United States. Late in the
870 decision-making process, detailed information about the local cost of living could help
871 prospective students decide to come to Vanderbilt.

872

873 *Strategy: Use the World Wide Web to conduct "virtual open houses."* While, as recommended
874 below, our top prospects should be actively encouraged to visit Vanderbilt, preferably for an
875 organized recruitment event, Web-based "chats" can be used to answer prospective students'
876 questions and help build personal relationships with them. Peabody's initial experience with a
877 virtual open house has confirmed the ease and convenience (e.g., University personnel and
878 alumni participate via computers in their offices or residences) of conducting such an event.
879 The response of prospective students was quite favorable.

880

881 *Strategy: Provide prospective graduate students opportunities for direct contact with faculty.* Because
882 prospective graduate students are attracted to institutions with outstanding and welcoming
883 faculty whose scholarly interests match their own, it is important that our faculty confirm that
884 Vanderbilt is such a University. We should build into the recruitment process direct
885 communications between our faculty and outstanding prospective students, particularly after
886 they have been admitted. Ideally, the communications should include correspondence by e-
887 mail or letter (both of which could be part of the automated contact management capabilities
888 recommended above), telephone conversations, and culminating face-to-face interactions as
889 part of a campus visit.

890

891 *Strategy: Place prospective graduate students in contact with current graduate students.* While contact
892 with faculty is of great importance to prospective students, they are likely to trust current
893 students to tell them what it is really like to study at Vanderbilt. Accordingly, we should
894 provide ways for applicants to interact with students who already are on campus. Enthusiastic
895 students who are enrolled in the graduate program of interest to a prospective student and who
896 are familiar with Nashville can very effectively promote Vanderbilt and the city.

897

898 *Strategy: Mobilize alumni to help with graduate recruitment.* In addition to assistance with the
899 feeder programs recommended above, our alumni can help with recruitment in many other
900 ways, including, for example, representing Vanderbilt at “graduate school fairs” at other
901 universities, nominating prospective graduate students, participating in virtual and on-campus
902 open houses, supplying their success stories for brochures, and meeting with prospective
903 students. Because an important goal of most persons contemplating graduate study is career
904 advancement, the testimonials (in brochures, on Web sites, or in person) of well-placed alumni
905 are powerful tools in graduate recruitment. Of course, our Ph.D. alumni will be effective in
906 recruiting the students we want only if they have positions in first-rate departments or
907 comparable settings and have proven themselves as teachers and scholars. Ultimately, effective
908 recruitment depends on effective placement.

909

910 *Strategy: Subsidize campus visits of highly qualified prospective graduate students.* At the time of an
911 offer of admission, some Vanderbilt programs extend an invitation to visit campus and meet
912 with faculty and current graduate students. We know such efforts work; we simply need to
913 make available modest funds to allow departments to recruit in this way. In some cases, an
914 “open house” involving several departments in related areas can reduce duplication of effort
915 and yield a more impressive event. Examples of multiple-department campus visitations
916 include Peabody’s Ph.D. recruitment weekend for four of its five departments and the series of
917 interview visits for groups of finalists for admission to the Interdisciplinary Graduate Program
918 in the Biomedical Sciences, which encompasses nine departments spanning Arts and Science,
919 Engineering, and the Medical Center.

920

921 **Financial Aid for Graduate Study**

922

923 While the strategies recommended above will increase the number of prospective students at
924 each stage of the process from initial contact to admission, our ability to matriculate those
925 whom we have accepted largely depends upon the competitiveness of our financial aid offers.
926 Accordingly, we must monitor the financial packages offered by our competitors, structure our

927 own awards to be competitive, and make sure that prospective students are aware of possible
928 awards and their actual awards in a timely manner.

929

930 *Strategy: Monitor the financial aid awards offered by our competitors.* Because low rates of
931 acceptance of offers of admission (yields) to some of our programs may reflect noncompetitive
932 financial aid offers on our part, we should obtain, on a program-by-program basis, information
933 regarding the financial packages offered by peer programs each year. In many cases, these data
934 can be obtained from Web sites; however, if the information we need is not posted, we should
935 solicit it.

936

937 *Strategy: Extend our use of top-off awards to attract top prospects.* Because funds for graduate
938 assistantship stipends are limited, top-off awards provide a way to create particularly
939 competitive awards for the most outstanding prospective students. The top-off awards that
940 previously have been based in the Graduate School should be continued and supplemented
941 with additional school-based awards. For example, Peabody has instituted its own top-off
942 awards and professional development funds that have helped attract exceptional students who,
943 in previous years, would have been lost to graduate programs at other universities. In addition
944 to increasing Peabody's yield, this strategy also raised the GRE scores (V+Q) of this year's
945 cohort by 135 points.

946

947 *Strategy: Offer five years of support.* To complete successfully with other schools, we must offer a
948 full five years of support for students who make satisfactory academic progress.

949

950 *Strategy: Offer summer funding.* In programs that currently offer no summer funding (e.g., many
951 non-science programs), students must seek non-academic summer employment to make ends
952 meet. More and more universities are offering all graduate students at least modest summer
953 funding. To be competitive, Vanderbilt must do the same.

954

955 *Strategy: Relieve graduate students of teaching responsibilities towards the end of doctoral study. At*
956 *leading research institutions, prospective students in the humanities and social sciences*
957 *currently are recruited to graduate programs with the promise of a dissertation year of support*
958 *free of teaching responsibilities. One-year dissertation fellowships and summer research*
959 *fellowships would offer fundraising opportunities for named fellowships at modest cost.*

960

961 *Strategy: Publicize available financial aid awards and cost-of-living information on program Web sites.*
962 *Because, as noted above, prospective students increasingly rely upon the World Wide Web for*
963 *information about graduate programs, it is essential that encouraging financial aid information*
964 *be included in each program's Web site. Such information should include the range of stipends*
965 *that will be awarded, make clear that tuition will be fully subsidized, and specify the duration*
966 *of support. In addition, each program's Web site should provide the standard budget used for*
967 *calculation of need-based financial aid as well as a comparison of Nashville's cost of living with*
968 *other cities in which the program's competitors are located. Such information should help us*
969 *by alerting prospective students to the fact that their Vanderbilt stipend will have more buying*
970 *power than the same amount in many other cities.*

971

972 *Strategy: Make firm funding offers at the time of admission. To attract the best graduate students,*
973 *we need to offer all the funding we can at the time of admission rather than simply holding out*
974 *the possibility of future funding. Without firm offers in hand, students who would prefer to*
975 *study at Vanderbilt may feel compelled to accept admission with a definite financial aid offer*
976 *from another institution.*

977

978 **Diversity and International Students**

979

980 Diversity is one measure of the richness of opportunities for intellectual and civic growth that a
981 university offers its students and faculty. This richness is expressed in the content and scope of
982 the curriculum and research as well as in the ethnic and cultural composition of the faculty and
983 student body. A diversity of ideas is not apt to flourish in the absence of a diversity of kinds of

984 human beings. As an institution that aspires to contribute to the knowledge and understanding
985 of the world, Vanderbilt needs to nurture diversity across its campus.

986

987 Diversity reflects the value a community of scholars places upon inclusion of contributions
988 made by different cultures and ethnic groups to a better understanding of the world. It reflects
989 an integration of distinct views and experiences that better mirror the population as a whole.
990 And it incorporates talented people from groups that are currently underserved who will
991 become leaders of our disciplines, professions and society in the future.

992

993 In promoting a greater future breadth of intellectual leadership through graduate education, it
994 is useful to distinguish two groups. This report addresses international students and faculty
995 first and, then, considers students and faculty from underserved groups of US nationals.

996

997 **International Students and Faculty**

998

999 Increasing numbers of international students are admitted to universities across the country.
1000 Some disciplines are staffed by significant numbers of international faculty. In other areas the
1001 numbers of international students and faculty can be quite low. Increasingly, students and
1002 faculty from the international arena have reasonable English-language skills; often they speak
1003 three or more languages.

1004

1005 International students often have received a high school preparation superior to US students,
1006 particularly in languages and sciences, which make them highly attractive. This seems to be
1007 true regardless of country because those who can avail themselves of such opportunities are
1008 from the highly educated elite. Such students score comparatively high on objective tests, such
1009 as the GRE, which is to be expected when applicants come from some of the largest, most
1010 competitive societies in the world.

1011

1012

1013 The reasons for recruiting international faculty vary considerably with academic discipline.
1014 Some fields recruit internationally because they are not able to fill their ranks domestically due
1015 to a shortage of home-grown professionals. Other disciplines strive to address the educational
1016 needs of a greater proportion of the world's students, reasoning that international faculty will
1017 help in recruiting and teaching them. Still others seek international faculty to broaden and
1018 energize intellectual scholarship that increasingly crosses cultural and national boundaries.

1019
1020 The overall rationale for strengthening international student and faculty participation in the
1021 university is composed of several strands. First, many intend to return home to help build their
1022 countries and societies utilizing the skills acquired in the U.S. Through their experience in the
1023 US they will more accurately and positively inform their nations regarding the strengths and
1024 weaknesses of our democratic society. Second, while they are in the U.S. they can teach
1025 students and faculty of the university about the reality of their home country and culture,
1026 thereby enriching U.S. understanding of them. The need to learn more about other countries
1027 and cultures is well understood. Third, if the U.S. is to remain competitive in international
1028 commerce, science and culture, U.S. students and faculty can only benefit from learning to
1029 compete with their international counterparts sooner rather than later.

1030
1031 *Strategy: Continue to recruit international graduate students and faculty.* Their contribution to the
1032 richness of intellectual life at the university is important. It is unlikely they would constitute the
1033 majority of a given class, though in a few specialized fields where U.S. applicants are few they
1034 may approach being so.

1035
1036 *Strategy: Strengthen recruitment of international faculty to be (and be seen to be) a university that*
1037 *addresses intellectual issues of broad, global significance.* This will make possible recruitment of the
1038 best international students. For strategic reasons (i.e. mentoring), such appointments should be
1039 at senior levels with more junior levels recruited for fixed-term appointments (e.g. 2-3 year
1040 visiting professorships).

1041

1042 *Strategy: Expand existing and create new opportunities in the U.S. for international students to*
1043 *participate in research projects, internships, practica, community service, field schools, etc. Through*
1044 *such exposure to actual U.S. workplaces, institutions and communities their knowledge of U.S.*
1045 *society and cultures will be deepened.*

1046
1047 *Strategy: Open up greater opportunities in other countries for U.S. students to participate in research*
1048 *projects, practica, community service, field schools, etc. Through such exposure to actual workplaces,*
1049 *institutions and communities in foreign countries, their knowledge of other societies and*
1050 *cultures will be deepened.*

1051
1052 *Strategy: Establish regularly available internship opportunities through formal agreements with*
1053 *multilateral organizations and transnational corporations for both U.S. and international students. This*
1054 *will help reinforce a vision of potential careers in the international arena for our graduates.*

1055
1056 *Strategy: Establish long-term collaborative relationships with key, well-regarded universities in other*
1057 *countries, and promote the regular exchange of faculty and students in structured, cooperative team*
1058 *research, teaching and service programs. Priority regions would be Latin America and the*
1059 *Caribbean, Europe, Central Asia, and parts of East Asia.*

1060
1061 *Strategy: To ensure excellence in international student recruitment, establish relations with key, well-*
1062 *regarded universities in other countries who will assist in credential evaluation. Consider also the*
1063 *International English Language Testing System (IELTS) or a contract with an external credential*
1064 *review agency to ensure accurate reporting. IELTS has a significant advantage in that it*
1065 *evaluates writing skills that are important for future graduate students. We could also use the*
1066 *resources of international faculty and students already here to help us review foreign*
1067 *applicants, possibly including performing telephone interviews. In any case, the*
1068 *"infrastructure" for managing the credential issue has to be created.*

1069

1070

1071 *Strategy: Once international students arrive, give them every support, including appropriate language*
1072 *instruction. This may include peer group interaction with tutors, courses in U.S. customs and*
1073 *lifestyles, short-term loans for intensive language training, timely visa support services and*
1074 *others. A semester "grace period" for language improvement may be a good idea for students*
1075 *in some disciplines.*

1076

1077 *Strategy: Curricular content in several disciplines should be reviewed and evaluated with an eye to*
1078 *building capacity to meet the needs of international students and faculty whose careers aim at returning*
1079 *home to develop their own societies and countries. It cannot be assumed that what is currently*
1080 *taught is adequate to meet that challenge.*

1081

1082 *Strategy: Assure that tuition issues do not get in the way of such international exchanges. This*
1083 *institution should be flexible and creative in dealing with productive "tuition exchange."*

1084

1085 **Underserved U.S. Nationals**

1086

1087 Diversity has characterized the U.S. experience and population throughout its history and is
1088 even more pronounced today. The integration of distinct views and experiences that mirror the
1089 population as a whole has the effect of enriching opportunities for intellectual, civic and
1090 spiritual growth that the university offers its students and faculty. A major challenge that faces
1091 our society is the inclusion of those talented people from groups previously excluded, including
1092 women, who have the capacity to become leaders of our communities, professions and
1093 disciplines in the future.

1094

1095 While there is a pipeline issue that reduces the number of American students from under-
1096 represented groups in graduate education, it is not difficult to find examples of institutions that
1097 have done well in recruiting these students. Their success has required commitment,
1098 considerable creativity, and some expenditure of funds.

1099

1100 A commitment to racial and ethnic diversity and to advancing women is expressed through
1101 recruitment of senior faculty who can lead the diversification of intellectual discourse and
1102 curricular content or who can serve as role models. This cannot be done through junior hires
1103 alone. In addition, students from historically underserved groups are attracted to institutions
1104 committed to diversity in their hiring practices. Creativity is required to foster welcoming
1105 conditions for such scholars, including joint-appointments in research centers, creation of
1106 distinguishing honors, competitive salaries and benefits packages, family-friendly policies, and
1107 their engagement in scholarly critique and debate on issues of mutual concern.

1108

1109 To achieve this goal, we need to agree to forego less urgent desires in order to dedicate
1110 resources to diversifying our faculty. What is needed is a more aggressive, targeted effort than
1111 has been undertaken in the past. Equally important, systematic planning is needed to ensure
1112 the active, programmatic engagement of scholars from underserved populations in the
1113 intellectual mission of the university and the social life of our community through, for example,
1114 deepening and expanding our commitment to service-learning projects in underserved
1115 populations. Students from underserved groups will undoubtedly continue to be attracted to
1116 the university. Both their numbers and quality will increase to the extent that we create a
1117 community of scholars that values diversity through its actions. The key action in this regard is
1118 appointment of senior faculty of African, Asian and Hispanic origins. Similarly, appointment of
1119 senior women faculty in some disciplines is needed.

1120

1121 *Strategy: Dedicate financial resources to recruit tenured senior faculty of African, Asian and Hispanic*
1122 *origins.* Efforts should be concentrated in departments that are likely to grow in national and
1123 international stature over the next five years (avoid such efforts in departments that show no
1124 signs of growth). In the absence of dedicated funds, it is unlikely departmental and disciplinary
1125 parochialism can be overcome in the short-run; and in the absence of dedicated funds to recruit
1126 the best people, the following efforts will yield more smoke than fire.

1127

1128

1129 *Strategy: Dedicate financial resources to recruit tenured senior women faculty in those areas where they*
1130 *are seriously underrepresented. As with other underserved groups, appointments should be*
1131 *targeted to departments most likely to yield growth in the years ahead. As well, the scholars*
1132 *who receive these appointments should seek to recruit more women scholars to their academic*
1133 *disciplines.*

1134
1135 *Strategy: Establish a task group to manage the recruitment of senior scholars from initial contact through*
1136 *contract signature. Such a group should be characterized by the (a) national prominence and (b)*
1137 *ethnic or gender diversity of its members. To be successful, all faculty must participate in the*
1138 *process (hosting visitors in their homes, including visitors in classes and seminars, attending*
1139 *visitor's presentations, introducing visitors to graduate students, colleagues and friends, etc.).*
1140 *Faculty who make this commitment should receive substantive, not symbolic, recognition. The*
1141 *task group would also spearhead student recruitment as a "learning exercise." Primarily this*
1142 *would include visits to campuses with high concentrations of underserved groups, learning of*
1143 *the needs of these students by talking with them, developing relationships with the faculty and*
1144 *administration of these campuses, and (most importantly) maintaining a continuing*
1145 *relationship and flow of information regarding our community of scholars and theirs.*

1146
1147 *Strategy: Students should be encouraged to visit the campus especially for an extended time (most likely*
1148 *during a summer) so that they can engage in scholarly activity to test the waters. Potential recruits*
1149 *will need a stipend during such extended stays, as well as housing. Many other universities*
1150 *already have such outreach programs targeting high school juniors from underserved*
1151 *populations.*

1152
1153 *Strategy: The university should ensure that underserved students have access to educational*
1154 *opportunities they would not have elsewhere. These include participation in international field-*
1155 *schools, faculty research projects, internships, community service-learning, practica, and so*
1156 *forth. In particular, they should be enrolled in courses taught by international faculty so as to*
1157 *obtain greater exposure to their place in the world, rather than simply the U.S.*

1158 *Strategy: As part of the overall outcomes research of all graduate students we should be especially focused*
1159 *on outcomes for students from underserved groups. Successful graduates from underserved groups*
1160 *should be engaged to help us evaluate the strengths and weakness of the programs from which*
1161 *they recently graduated, from their unique point of view, in an ongoing effort to build greater*
1162 *capacity to address the needs of such students through feedback.*

1163

1164 *Strategy: While maintaining high standards we should be prepared to be creative in terms of admissions*
1165 *requirements, and to offer support courses for these students especially in the first years here. In*
1166 *particular, for those U.S. nationals from underserved groups who lack language and writing*
1167 *skills, programs and schools need to work to provide tutoring, short-courses and specialized*
1168 *training opportunities.*

1169

1170 **A Culture of Evaluation**

1171

1172 Quality in graduate programs is somewhat subjective such that leading criteria for one field of
1173 study are nearly meaningless in another. (Compare, for example, the criterion of externally
1174 funded graduate students applied to Engineering and English). Nevertheless, quality in a field
1175 is something that scholars outside the field can recognize when they see it. Just as good art can
1176 be Impressionist, Abstract Expressionist, or Realist, there are certain judgments that faculty
1177 from other parts of the university can legitimately render about the quality of graduate
1178 programs not their own.

1179

1180 *Strategy: The Associate Provost for Graduate Education (University Central) and Senior Associate Dean*
1181 *of Biomedical Education and Training (VUMC) should prepare an annual report that lets faculty know*
1182 *where their programs stand on relevant measures of quality and performance. Information fosters*
1183 *healthy competition. An annual report on graduate education ought to go to each member of*
1184 *the faculty, university-wide. The purpose of the report would be to disseminate information*
1185 *now known by the provost, deans and graduate program directors only to the broadest possible*
1186 *level where cognitive and behavioral change is desired. The quality of the Vanderbilt faculty*

1187 has improved dramatically in the last decade in many departments and schools. Yet the quality
1188 of the graduate student body in these same programs has not improved in like measure. This
1189 suggests the importance of concrete measures to specifically target graduate admissions quality.
1190 One of the places the Provost's Office can take a leadership role in graduate education is in
1191 helping to benchmark programs, their measures and early signs of outcomes.

1192

1193 *Strategy: As part of a comprehensive commitment to evaluation, each graduate program should develop*
1194 *measures by which it can best be evaluated and then regularly benchmark themselves against those*
1195 *measures.* The nature of graduate education guarantees that strategic improvements come to
1196 fruition only years after they are begun. Even a multi-million dollar investment in a graduate
1197 program cannot guarantee a top-five Ph.D. program in five years, or even ten. On the other
1198 hand, the measures of excellence in graduate education are widely known and are used in the
1199 National Research Council (NRC) rankings and field specific evaluations. It is a truism that we
1200 evaluate what we value. At Vanderbilt frequent evaluation and planning for improvement
1201 need to be a feature of university-wide graduate education efforts. Moreover, we believe that
1202 graduate education is sufficiently distinct from professional and undergraduate education so as
1203 to argue for internal evaluations of graduate programs separately from the departments in
1204 which their faculty are based. These evaluations ought to serve as indications of where
1205 graduate programs are likely to rate in external rankings and so surface issues for continuous
1206 improvement by the faculty leadership that guides the programs.

1207

1208 *Strategy: Periodic external evaluations should focus on graduate education efforts and include*
1209 *comparison to closely related programs within the institution.* There also would be merit in doing
1210 graduate program evaluations in clusters of closely related programs in order to foster a cross-
1211 program continuous improvement ethic, to build leadership across departmental walls, and to
1212 draw attention to systemic problems that require solutions beyond the level of the particular
1213 program. Our faculty are often sought out to be peer reviewers for other institutions. It is time
1214 we made better use of these talents internally.

1215

1216 **Benchmarking Progress: Information and Data Requirements**

1217
1218 Setting concrete goals, both short-term and long-term, that can be monitored over time is critical
1219 if Vanderbilt is to achieve its aspirations in graduate education. The timeline to realize the
1220 benefits of additional investments in graduate education is a long one, unfolding over 15-20
1221 years. If we are to be successful, we must adopt the strategies of a long-term investor and not
1222 expect immediate and dramatic improvements in quality. If we stay the course over the next
1223 two decades, Vanderbilt will take its place among the great research universities of the United
1224 States.

1225
1226 Vanderbilt must be able to document that progress is being made on various fronts. This
1227 provides an opportunity to make mid-course adjustments and to demonstrate accountability.
1228 Moreover, the collection and ready availability of valid data are marks of a well-organized
1229 graduate program. Yet, to be clear, the benefits of such a strategy far outweigh the satisfaction
1230 of merely having a well-run program and justify the expense of the data collection. Data
1231 collection and benchmarking, together, provide a potent and fair tool to evaluate current
1232 programs and to offer guidance as to those areas deserving reward, or those areas in need of
1233 additional improvement and support.

1234
1235 *Strategy: Faculty in distinct areas must establish appropriate benchmarks for their programs that are to*
1236 *be approved by the responsible school dean or deans. Benchmarks for success need to be crafted*
1237 *across the life histories of our students, from the quality they bring with them at matriculation to*
1238 *the achievements attained during their careers. Listed on the next two pages are some initial*
1239 *ideas.*

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1244

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1246

Entry

Time Frame	Data Source
All students will aspire to a career that will make a difference at a national level.	Application Interview
The academic profile of the students in terms of GRE scores and GPA will be unsurpassed nationally.	Application
Students will convey a passion to excel (e.g., they will convey a commitment to inquiry; a sense of curiosity and creativity; a proclivity for intellectual engagement; an affinity for research and scholarship; zeal).	Interview Application

1247
1248
1249
1250

During Graduate Education (years 2, 3, 4)

Time Frame	Data Source
Participation at conferences	Vita
Presentations at conferences	Vita
Funding applications	Vita
Funding for work	Vita
Publications	Vita
University/College awards and recognition	Vita
External awards and recognition	Vita
Teaching experiences	Vita

1251
1252
1253
1254

At Graduation

Time Frame	Data Source
Vita competitive to be hired at Vanderbilt University (using categories listed in “during education,” adjusting post-doctoral experience).	Vita Profile
First position	Interview
Prestige of institution, lab, etc.	Interview

1255
1256
1257
1258
1259

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1261

Early Career (years 3, 7)

Time Frame	Data Source
Success on the job	Survey
Recognition for making important contributions	Survey & Citations
Received tenure	Survey

1262
1263
1264
1265

Mid-to-Late Career (years 10, 15, 25)

Time Frame	Data Source
Success on the job (promotion, movement to first-tier universities, etc.)	Survey
Recognition for making contributions (e.g., professional awards and honors for work; turning out well-respected new scholars; patents).	Survey & Citations

1266
1267

1268 *Strategy: Once benchmarks are established, faculty members should establish the current*
1269 *baseline for each variable. Progress can be determined only if we know where we are starting*
1270 *from or how well we are doing with regard to each benchmark before any changes are*
1271 *implemented. Thus, the standing of current students and recent graduates needs to be compiled,*
1272 *tabulated, and analyzed.*

1273

1274 *Strategy: An electronic survey needs to be developed and conducted centrally to survey our*
1275 *graduates to obtain the necessary benchmark data. This critical task would be handled by the*
1276 *person in charge of institutional research for graduate education in collaboration with the various*
1277 *schools. IGP has a discipline specific approach that might be modified. Another example is the*
1278 *Mellon Foundation’s recent survey of faculty.*

1279

1280 *Strategy: Individual programs should collect and evaluate data that track graduate students throughout*
1281 *their graduate careers. Vanderbilt has set a high standard in tracking undergraduates from*
1282 *application through graduation. A similar effort for graduate students is necessary if the*

1283 university is to achieve its potential as a leader in graduate education. This might include GPA
1284 and qualifying exam performance, university service and honors, faculty advisor, financial
1285 support, as well as monitoring the timeline followed by the student (e.g., satisfying
1286 departmental requirements, committee members assigned, committee meetings, filed reports of
1287 meetings, published material, time to qualifying exam, time to degree).

1288

1289 *Strategy: Each program should collect data on how well it fares in the market place. Data from the*
1290 *application process should permit one to identify the strengths and weaknesses of the program*
1291 *in its ability to attract the most talented students to an individual program, as well as to*
1292 *construct the overall performance of the university. These indices should be monitored over*
1293 *time to ensure progress. Some of the common elements to track include:*

- 1294 • Size of applicant pool
- 1295 • Percentage admitted
- 1296 • Yield of admitted students
- 1297 • Gender, ethnicity, international student status of admitted students
- 1298 • Quality of incoming students versus admitted students who did not matriculate
- 1299 • Other schools applied to by matriculants
- 1300 • Of those admitted but not coming, the school of choice
- 1301 • Reasons for declines and for accepts.
- 1302 • Financial details of stipend, inc. source of funds.

1303

1304 *Strategy: Program evaluations should be supported by regular data collection and review. The elements*
1305 *that need to be tracked include the following:*

- 1306 • Regular internal/external reviews.
- 1307 • Evaluation of the program from the student's perspective
- 1308 • Productivity of faculty including citation frequency.
- 1309 • Grant portfolio of faculty.
- 1310 • Faculty/student ratios.

- 1311 • Faculty demographics (e.g., diversity)
- 1312 • Ability to attract training grants and other direct student support vehicles, where
- 1313 appropriate to the field
- 1314 • Attrition and reasons for students leaving.

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Part Three: The Structure of Change: Leadership, Arrangements, and Investments

The report to this point has detailed a vision for graduate education at Vanderbilt. In the report our task force has offered numerous strategies for improving graduate education. Yet changes in cultures as complex as research universities do not emerge merely from good ideas and clear analysis. Visions and commitments must be given structures and resources for positive change to be effected. In this part of the report, the task force considers the questions of who will be charged to implement this report if accepted and the investments that need to be made to make those strategic ideas realities. And here we offer recommendations for how graduate education at Vanderbilt ought to be led, structured, and supported. We begin with recommendations as to function and structure and then assess the financial cost of the vision, strategies and structures we have recommended.

Function and Structure

The Vanderbilt community must become confident in the quality of existing and ongoing graduate programs and that graduate education either is or will become outstanding and will be recognized as such. Developing a culture of excellence in graduate education was first addressed by the Task Force and became a high priority. There was also a belief that form should follow function. Thus, administrative structure is addressed in this, the last section of the report.

Here we propose an administrative structure for graduate education that we feel can best bring to life the vision and aspirations set for graduate education in our report and for implementing the strategies developed throughout our deliberations. As well, the proposed administrative structure represents the mechanism for assuring and affirming quality. It allows for centralization of those activities that are common to multiple schools in the interest of efficiency, for ensuring that

1343 graduate education does not become balkanized, and for providing a means to explore new
1344 graduate training opportunities, particularly at the interface of disciplines, such as those espoused
1345 in programs proposed and funded by the Chancellor's Academic Venture Capital Fund.

1346
1347 There are three basic categories of graduate programs to be handled within the administrative
1348 structure: *department/school-centered* programs, *interdepartmental* programs, and *interschool*
1349 programs. Department/school-centered graduate programs feature courses and research that
1350 occur primarily or entirely in a single academic department or within a single college/school.
1351 Interdepartmental graduate programs feature courses and research that span several departments,
1352 all of which reside in a single college or school. Interschool graduate programs feature courses
1353 and research involving academic units in two or more colleges or schools.

1354
1355 As stated in the Introduction, the faculty bear the ultimate responsibility for excellence in
1356 graduate education. A school can provide only the infrastructure and support for the faculty's
1357 efforts. Nevertheless, administrative structures and leaders exist at the university to provide the
1358 context and culture for excellence and to maintain a steady focus on achieving excellence in
1359 graduate education and research. The deans of the schools are also graduate faculty and must
1360 share with their faculty colleagues responsibility for the work undertaken and outcomes
1361 produced.

1362
1363 *Recommendation: A Graduate Faculty Council should remain and continue to serve in an*
1364 *advisory capacity to the Associate Provost for Graduate Education and Senior Associate Dean*
1365 *for Biomedical Education and Training.* We are recommending no changes here. Yet
1366 consideration should be given to ensuring that the Graduate Faculty Council better represents
1367 those who are now involved in graduate education and at a true level of excellence. The
1368 responsibilities of this body include approving all new graduate programs and major changes to
1369 existing programs; setting minimal requirements and standards for graduate degrees; and

1370 advising the associate provost for graduate education and the senior associate dean for
1371 biomedical education and training in policy matters concerning graduate education.

1372
1373 *Recommendation: As the chief academic officers of their schools or colleges, the academic or*
1374 *school deans bear the primary administrative responsibility for the conduct and quality of*
1375 *undergraduate, graduate and professional education in their schools or colleges. For*
1376 *interschool programs, that responsibility is shared jointly by the deans of the participating*
1377 *schools. Vested in them is also the authority to establish and eliminate programs with the*
1378 *concurrence of the Graduate Faculty Council, the associate provost for graduate education and/or*
1379 *the senior dean of biomedical education and training (VUMC), provost and/or vice chancellor for*
1380 *medical affairs, chancellor, and the Board of Trust.*

1381
1382 *Recommendation: Create an Office of Graduate Studies that provides central services and*
1383 *coordination to support graduate education throughout University Central. The existing Office*
1384 *of Biomedical Education and Training will handle these functions for the medical and nursing*
1385 *schools. The Office of Graduate Studies and the Office of Biomedical Education and Training*
1386 *together should provide designated central services for all of Vanderbilt's graduate programs,*
1387 *such as registration, central record-keeping, degree audits, and institutional research. It shall*
1388 *meet regularly with the Graduate Faculty Council. This office will help coordinate, as needed,*
1389 *the development of new interschool programs and offer assistance to students whose needs*
1390 *require special attention. The Office of Graduate Studies is expected to assist school deans in*
1391 *every way possible in their efforts to increase the quality and visibility of their graduate*
1392 *programs and the quality and number of their graduate students. It also will provide the vehicles*
1393 *for ensuring that school deans meet and collaborate. The Office of Graduate Studies may carry*
1394 *out special projects, manage special programs (e.g., graduate fellowship programs), or otherwise*
1395 *provide central coordination for the university (as with, for example, a major proposal for multi-*
1396 *school, graduate student support).*

1397

1398 *Recommendation: The Office of Graduate Studies will be led by the Associate Provost for*
1399 *Graduate Education, who works in partnership with the Senior Associate Dean for Biomedical*
1400 *Education and Training, and reports to the Provost and Vice Chancellor for Academic Affairs.*
1401 With the support of the Graduate Faculty Council, the new Office of Graduate Studies and/or the
1402 new associate provost for graduate education as well as the existing senior associate dean for
1403 biomedical education and training and the Office of Biomedical Education and Training would
1404 have at least the following responsibilities:

1405

- 1406 1) Facilitate the development by faculty of interdisciplinary programs that would bridge
1407 existing schools
- 1408 2) Explore, in collaboration with school deans, new educational and research opportunities
1409 to which Vanderbilt's faculty are uniquely poised to contribute and from which
1410 Vanderbilt's students are uniquely poised to benefit
- 1411 3) Facilitate the submission of training grants, where available, that cut across departments
1412 and schools
- 1413 4) Assist in developing some of the elements that focus on graduate education and training
1414 for departmental and/or school reviews by external advisory panels (e.g., provide the
1415 overall graduate education context)
- 1416 5) Develop, with input from the schools, departments and programs, objective measures of
1417 success, and request and compile data annually
- 1418 6) Prepare for the university community an annual state-of-graduate-education report
- 1419 7) Oversee the staff for the functions of registrar, student grievances, student misconduct
1420 and disciplinary issues, dissertation formatting and editing, international student issues,
1421 minority recruitment, and institutional research for both University Central and the
1422 Medical Center
- 1423 8) Develop and maintain, in an updated format, information about the recruitment, retention,
1424 quality, progress, and placement of graduate students
- 1425 9) Represent Vanderbilt at national or regional coordinating functions and meetings

- 1426 10) Inform and educate the Vanderbilt community on issues critical to graduate education
1427 11) Define and maintain a set of appropriate standards for admission, satisfactory progress,
1428 degree completion, membership on thesis and dissertation committees, and other
1429 components of the graduate academic mission
1430 12) Coordinate graduate education efforts across schools and programs.

1431

1432 *Recommendation: As soon as the appropriate approvals can be obtained, graduate students'*
1433 *enrollment will reside in the appropriate school or schools (for joint programs).* Currently, all
1434 graduate students are enrolled in the graduate school. This will no longer occur as the school
1435 would no longer exist. Rather, enrollment will reside within the school or schools that have
1436 primary responsibility for the programs into which the students matriculate. Nonetheless, the
1437 Ph.D. remains a Vanderbilt degree.

1438

1439 *Recommendation: Decentralize many of the functions currently fulfilled by the Graduate School,*
1440 *sometimes in a duplicative fashion, to better align responsibility with where work is conducted*
1441 *and relevant knowledge resides.* In particular, the entire admissions process, including receiving
1442 applications and letters of recommendation, sending acceptance letters, and putting together
1443 financial-aid packages, including top-off awards, should devolve to colleges and schools, as
1444 should the responsibility for approving doctoral committees. (As a result of a report issued by
1445 the Graduate Applications Implementation Team and submitted by the deans to the provost,
1446 decentralization of processing graduate applications is already occurring so that greater
1447 efficiency could be experienced this academic year.)

1448

1449 We envision that deans with graduate programs, and associate deans with graduate program
1450 responsibilities, will meet frequently, as necessary, with one another and with the associate
1451 provost for graduate education, the senior associate dean for biomedical education and training,
1452 and the chair of the Graduate Faculty Council so as to coordinate policies and procedures
1453 promoting excellence in graduate education.

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For programs based within a single school, the following activities* would be carried out by that school or delegated by the dean to a particular department or program leader. For programs that involve multiple schools, those activities would be carried out by individuals and offices identified at the time of the establishment of those programs.

- 1) Create an applicant pool
 - Advertise
 - Market
 - Recruit, including visits and events
 - Recruit to enhance racial, ethnic and gender diversity and greater internationalization
- 2) Receive applications and respond/confirm
 - Evaluate applications
 - Develop and make offers
 - Keep statistics throughout the process (critical for funding opportunities)
- 3) Admit to programs those who accept offers
 - Provide information about housing / living
 - Establish each student's I9 immigration status by working with the Office of International Scholar and Student Services
 - Arrange stipends, tuition or waivers, professional development funds, etc.
 - With input of faculty, select students to receive top-off awards.

- 1482 4) Provide academic advising
- 1483 • Arrange link-up with faculty advisors and arrange ongoing financial support
 - 1484 • Approve doctoral committees
 - 1485 • Evaluate students' performance regularly, with feedback to students
 - 1486 • Mentor/nurture (personal/academic); monitor progress
 - 1487 • Provide career advice and placement assistance

1488

1489 5) Communicate with alumni – maintain faculty contact with department and school graduate

1490 alumni

1491

1492 6) Evaluate entire program and process periodically, but analyze the statistics annually.

1493

1494 [*An exception, of sorts, is the Interdisciplinary Graduate Program (IGP) involving the School of Medicine and the

1495 Department of Biological Sciences, College of Arts and Science, which serves as an entry route for department-

1496 based Ph.D.'s of the participating departments as well as the Ph.D. in Neuroscience. The IGP also parents the first-

1497 year core curriculum and related training activities for the first nine months of these multiple programs. Ph.D.-

1498 granting programs linked to the IGP would presumably rely on the current IGP process for activities 1, 2, and 3

1499 above or engage in IGP - and school/ department/program-based activities 1, 2 and 3 in parallel.]

1500

1501 Another exception is the Graduate Department of Religion that is managed by the Divinity School, but involves

1502 faculty from five other schools. The Divinity School would continue to be administratively responsible for the

1503 program and required reporting. The terms of participation by faculty of other schools is a matter for coordination

1504 and agreement between deans.

1505

1506 *Recommendation: The graduate application process should switch from being primarily a paper*

1507 *driven process to an electronic process, waiving the application fee if students apply*

1508 *electronically.* The Web-based system currently used by the Interdisciplinary Graduate Program

1509 in Biomedical Sciences [referred to as either "the IGP system" or "Excalibur"] should be adapted

1510 for use by all of the University's graduate programs. This recommendation, which has already

1511 been implemented, was made after the completion of a feasibility study by the Graduate

1512 Applications Implementation Team during the summer 2002. To encourage students this year to
1513 apply electronically and to increase the number of applications, the application fee for on-line
1514 graduate applications was waived on a trial basis. (Applications doubled.)

1515

1516 *Recommendation: Provide on-line application support for each school, reallocating centralized*
1517 *graduate school staff but with supervision provided by the schools.* Schools require assistance to
1518 handle the application process that is now fully their responsibility (e.g., scanning supplementary
1519 application materials such as transcripts and letters of recommendation, following through with
1520 applicants). Existing graduate school personnel are currently providing this assistance to the
1521 schools/colleges, where needed, with the schools supervising their work. It is essential that this
1522 arrangement continue as the Graduate School evolves to become an Office of Graduate Studies.

1523

1524 *Recommendation: Hire at least one individual responsible for institutional research.* Currently,
1525 no such individual exists for graduate education. At least one is needed to work with Greg
1526 Perfetto, who handles institutional research for undergraduate education. The electronic
1527 application process and the data maintenance functions contained within Excalibur, including
1528 portfolio maintenance for individual students, will facilitate this task immensely.

1529

1530 *Recommendation: Hire recruitment coordinators for each school or within natural graduate*
1531 *program clusters.* Recruiting top students, marketing programs, and developing effective
1532 communications strategies is a full-time endeavor. We cannot expect to attract top talent to
1533 Vanderbilt without such an investment. The recruitment coordinator would work with specific
1534 departments and programs.

1535

1536 *Recommendation: Each school dean assigns major responsibility for attracting high-quality*
1537 *graduate students to the departments and programs within which those students would study.*
1538 Departments and programs recruit students by means of the excellence of their programs, the
1539 scholarly reputations of their faculty, advertising using Web pages, brochures and similar

1540 vehicles, campus visits, special recruitment events, and other personal contact. The recruitment
1541 coordinators will be of assistance to departments in this regard.

1542

1543 *Recommendation: Hire a minority recruitment officer for graduate education.* This individual
1544 will serve all programs in an effort to enhance the diversity of the graduate student population.
1545 Of course, individual schools will have this responsibility as well.

1546

1547 *Recommendation: Each school dean's office should bear the responsibility for approving*
1548 *admissions and offers of financial assistance for programs in that school, so that school deans or*
1549 *their delegates can issue the formal letter of admission, in a timely manner, with whatever*
1550 *financial aid has been arranged.* Departments and programs first *receive* applications
1551 electronically and then *evaluate* them to determine which students should receive offers of
1552 admission. These decisions are then approved by school deans or their delegates as is any
1553 financial aid packet accompanying admissions. Application statistics and related information
1554 should be maintained at the department, program and/or school levels using the computer-based
1555 format common to all departments, programs, and schools (i.e., currently Excalibur). The degree
1556 to which a given dean's office centralizes any or all of the processes of recruiting, application and
1557 offering admission may vary from school to school, however.

1558

1559 *Recommendation: Departments and programs should respond directly to students who accept*
1560 *or decline offers of admission.* The mail response to an accepted offer is congratulatory,
1561 welcoming and informational (housing information, names of campus contacts, immigration
1562 requirements, and so forth), preceded or followed by a telephone call. Students accepting
1563 Vanderbilt offers should be asked, in addition, to identify the details and schools of origin of the
1564 offers they declined. The mail or e-mail response to a declined offer consists of an
1565 acknowledgement and a request to fill out an information sheet that inquires about 1) the offer
1566 the student chose to accept instead of Vanderbilt's offer and 2) the reasons for the student's
1567 choice. Departments and programs keep detailed contact records with potential applicants,

1568 acceptances, and matriculations, and maintain contact with admitted students, continuing the
1569 recruiting process through matriculation, after which the focus shifts to education, mentoring,
1570 and retention.

1571
1572 *Recommendation: While there must be a single registrar's office for all graduate students,*
1573 *schools with the capacity to handle the registrar functions themselves should be allowed to do so*
1574 *if it provides enhanced services and/or efficiency. School registrars have the responsibility,*
1575 *however, of coordinating their efforts with the central registrar. The centralized office of the*
1576 *graduate registrar and all the functions associated with that office (e.g., degree audits) would be*
1577 *housed organizationally within the Office of Graduate Studies.*

1578
1579 *Recommendation: New graduate-degree programs must be approved by the school's faculty or*
1580 *Faculty Council, by the cognizant school dean(s), the Graduate Faculty Council, the Associate*
1581 *Provost for Graduate Education and/or the Senior Associate Dean for Biomedical Education*
1582 *and Training, by the Provost and/or Vice Chancellor for Health Affairs, by the Faculty Senate,*
1583 *by the Chancellor and finally by the Board of Trust. Departments and programs then maintain*
1584 *the curricula to support existing graduate degrees, subject to approval by the academic dean(s).*

1585
1586 *Recommendation: School deans, in consultation with faculty, should establish the criteria that*
1587 *faculty in a given college or school must meet in order to teach graduate courses and/or to*
1588 *supervise thesis or dissertation research. A given dean may, then, choose to confer an intrinsic*
1589 *right to teach and/or supervise research at the graduate level upon all school faculty who meet*
1590 *the minimum criteria, leaving it to departments to handle teaching assignments in an appropriate*
1591 *manner. The associate provost for graduate education (APGE) and/or the senior associate dean*
1592 *for biomedical education and training set minimum standards for determining which faculty are*
1593 *appropriate to teach graduate courses, to supervise thesis or dissertation research, and to serve on*
1594 *thesis or dissertation committees. Thus, deans may set only higher standards in their*
1595 *schools/colleges if they so choose. When special circumstances warrant it, deans may request*

1596 graduate teaching/supervision status for faculty who do not appear to meet those minimum
1597 standards.

1598

1599 *Recommendation: Each school dean is responsible for ensuring that the doctoral work of each*
1600 *department is of high quality.* School deans' offices follow up each final defense of a graduate
1601 degree in their schools with a brief questionnaire, sent to each member of the examining
1602 committee, that inquires about 1) the publications resulting from the graduate work, 2) the
1603 quality and impact of the research described in the thesis or dissertation and 3) the quality of the
1604 oral presentation and defense. The dean also obtains the candidate's CV. Each dean's office
1605 collects annually, as well, a designated set of quantitative information about 1) the most recent
1606 admissions year, 2) the status of its current graduate students and copies of their emerging CVs,
1607 and 3) the financial underpinnings of its graduate program. The relevant school deans will
1608 assure the collection of information for inter-school programs, but it is likely that a designated
1609 office that serves those programs will take responsibility for collecting and synthesizing the
1610 necessary data.

1611

1612 *Recommendation: An on-line system for tracking the progress of graduate students should be*
1613 *established.* The system should enable each program to develop a detailed CV for each student
1614 in the program. Evaluating collectively the emerging CVs, the committee believes, is the best
1615 means of monitoring the quality of graduate programs. Information for each graduate student
1616 would be obtained from three sources--students records, the database generated by the on-line
1617 graduate applications system, and the database generated by the new system—with
1618 communication among the three databases. Information flowing into this system will be entered
1619 by DGS's and by individual graduate students. The latter will have writing privileges to only a
1620 limited number of fields. A preliminary schematic outline of the data to be collected by the three
1621 aforementioned databases can be found in figure 1. (Of course, the CVs students used in their
1622 job searches should be individualized.)

1623

1624 *Recommendation: The Associate Provost for Graduate Education and the Senior Associate*
1625 *Dean for Biomedical Education and Training should prepare and present jointly an annual*
1626 *“State of Graduate Education” report. By using the information collected and provided by the*
1627 *deans for their programs, the Office of Graduate Studies and the Office of Biomedical Education*
1628 *and Training will assemble a university-wide description of the current status, progress towards*
1629 *goals, and needs to be provided to the offices of the provost and the vice chancellor for health*
1630 *affairs. It also will be shared with the deans, the graduate faculty, and other stake-holders.*
1631 *Because enhancing graduate education is one of Vanderbilt's chief goals, it is important to create*
1632 *reports that will provide annual assessments of the progress that is being made, overall and*
1633 *program by program, toward institutional goals.*

1634
1635 *Recommendation: Each school dean will use the aforementioned statistical information for that*
1636 *school as the basis for an annual report to the provost, in University Central, and to the vice*
1637 *chancellor for health affairs, in VUMC, on the quality and status of graduate education in that*
1638 *school. These reports also will be shared with the relevant faculty and other stake-holders.*

1639
1640 *Recommendation: The separate commencement ceremony for graduate students should be*
1641 *eliminated. PhD recipients would be recognized at the main university ceremony but hooded in*
1642 *separate school ceremonies, possibly the evening before or as part of the school's regular*
1643 *commencement ceremony. This would allow students to graduate as part of the ceremonies for*
1644 *their own school, where they define their loyalty, and it would prevent faculty from being spread*
1645 *out over possibly three simultaneous ceremonies. This recommendation could not be*
1646 *implemented until May 2004 at the earliest.*

1647
1648 *Recommendation: Any savings in the graduate school budget generated from decentralization*
1649 *should either be returned to schools to be reinvested in graduate education or reinvested in some*
1650 *other way that directly benefits graduate education. Currently, schools pay a higher tax on*
1651 *graduate student tuition revenue than on any other revenue (approximately 23 percent vs. 12*

1652 percent). The difference goes to cover the costs of the graduate school, its scholarships, and top-
1653 off awards. The money for scholarships, top-off awards, and travel funds should be returned to
1654 schools for distribution. Administrative savings centrally should either be returned to schools to
1655 cover their extra expenses resulting from decentralization or reinvested in some manner to
1656 benefit graduate education.

1657

1658 *Recommendation: The Associate Provost for Graduate Education and the Senior Dean of*
1659 *Biomedical Education and Training need to work out details for any recommendations that are*
1660 *accepted but need further refinement, using either the Graduate Faculty Council (if policy is*
1661 *involved) or working groups with relevant expertise. The committee did not attempt to*
1662 *anticipate every detail in need of resolution for implementation and decided this was the most*
1663 *realistic approach.*

1664

1665 **Investments in Graduate Education**

1666

1667 If Vanderbilt University is to move forward with its commitment to enhance graduate education,
1668 a plan must be established that is realistic in terms of the time required to achieve eminence in
1669 selected disciplines across the various schools and the resources that will be essential for these
1670 major improvements. One must be mindful as well that our peer institutions will not be sitting
1671 still while Vanderbilt is making additional investments in graduate education. Two examples
1672 will illustrate the competitive landscape in graduate education. Harvard University announced
1673 late in 2001 that it was investing an additional \$4 million annually to increase support for
1674 graduate students. These funds will provide for two full summers of support for graduate
1675 students in the humanities and social sciences and a service-free first year and increased stipends
1676 for all students in the sciences. Similarly, Princeton University announced early in 2002 that all
1677 first-year graduate students in science and engineering disciplines will receive full-tuition
1678 fellowships and duty-free stipends. Also, \$1.8 million in additional support was approved for

1679 doctoral students in the humanities and social sciences to provide summer support ranging from
1680 \$3,000-4,500 per student.

1681
1682 Based upon extensive discussions held over the past two years and culminating in the formation
1683 of the Graduate Education Task Force, many proposals have been advanced to support our quest
1684 for excellence in graduate education, especially within University Central. The remainder of this
1685 document will attempt to summarize many of the promising avenues for investment that have
1686 been advanced, provide estimates of costs that will be incurred, and suggest the probable sources
1687 of funding.

1688

1689 **1. Enhance the budget for recruiting prospective graduate students to Vanderbilt (to**
1690 **begin in year one)**

- 1691
 - In the IGP, current costs are \$140,000 per year to interview 140 students.
1692 Increase the budget for University Central schools to **\$60,000** (120 students @
1693 \$500) to account for departments that are strong academically but currently lack
1694 funds for recruitment.

1695

1696 **2. Enhance stipend offers for graduate students (to begin in year one with full**
1697 **implementation by year five)**

- 1698
 - Requires careful tracking of information on offers made by peer institutions.
1699 (This is currently in place in the IGP.) Assume a small percentage of students
1700 currently receive competitive offers. Assume that investments will be made
1701 selectively.
 - 150 students X \$4,000 = **\$600,000** in additional support per year to make stipends
1702 competitive with peer institutions. This cost must be extended over a 5-year
1703 phase-in period.
1704

1705

- 1706 **3. Additional topping off awards (to begin in year one with full implementation by**
1707 **year five)**
- 1708 • We need to determine how much additional money for topping off awards we
1709 need to make available for recruiting our most talented applicants and then devise
1710 a plan for central versus school-based distribution of the funds.
 - 1711 • Provide 80 additional topping off awards @ \$5,000 = **\$400,000**. This cost must
1712 be extended over a five-year phase-in period.
- 1713
- 1714 **4. Minority student recruitment expenses (to begin in year one)**
- 1715 • Total annual costs = **\$50,000**
- 1716
- 1717 **5. Health Insurance for graduate students (to begin in year one with full**
1718 **implementation by year five)**
- 1719 • Provide health insurance for current graduate students.
 - 1720 • 140 students @\$1,000 = **\$140,000**. This cost must be extended over a five-year
1721 phase-in period.
- 1722
- 1723 **6. Increase the number of graduate slots in humanities and social science programs**
1724 **that currently lack a critical mass of students (to begin in year three with full**
1725 **implementation by year seven)**
- 1726 • Several high quality programs currently have a graduate student-to-faculty ratio of
1727 less than one. Increases in numbers are required to promote retention of faculty in
1728 these departments and to develop the critical mass of intellectual resources
1729 required to sustain an excellent graduate program.
 - 1730 • Add 150 new graduate students slots across all University Central Schools @
1731 \$21,000 = **\$3,150,000**. This cost must be extended over a five-year phase-in
1732 period. (Costs are in year one dollars.)
- 1733

- 1734 **7. Increase travel and research support for graduate students (to begin in year three**
1735 **with full implementation in year four)**
- 1736 • Assume the greatest need is in the humanities and social sciences where research
1737 funds are less readily available. (Costs are in year one dollars.)
 - 1738 • Provide support for one trip per year per graduate student. Approximately 450
1739 students @ \$500 = **\$225,000**
 - 1740 • Research funds for selected graduate students. Approximately 200 students @
1741 \$1,500 = **\$300,000**
 - 1742 • Support for two summers for graduate students in the humanities and social
1743 sciences, including some programs at Peabody College. Assume an entering class
1744 of 105 X \$4,000 X 2 = **\$840,000**. This cost must be extended over a two-year
1745 phase-in period.
- 1746
- 1747 **8. Provide a guaranteed fifth year of support for all graduate students (to begin in year**
1748 **five)**
- 1749 • Increase the overall level of support by 25 percent for all graduate students
1750 currently admitted with four years of support guaranteed.
 - 1751 • Assume 115 students X \$15,000 = **\$1,725,000**. (Costs are in year one dollars.)
- 1752
- 1753 **9. Dissertation Year and Professional Development Awards (to begin in year five)**
- 1754 • Provide twelve-month support packages for dissertation year support and for
1755 professional development opportunities (e.g. placements at Vanderbilt University
1756 Press, special collections, assignment as executive editors for journals, etc.)
 - 1757 • 20 slots @ \$20,000 = **\$400,000**
- 1758
1759

1760 **Other issues that must be addressed by the associate provost of graduate education and**
1761 **senior associate dean for biomedical education and training as part of a long-term strategy**
1762 **to enhance graduate education at Vanderbilt University:**

1763

1764 **1. Graduate Student Tuition**

- 1765 • In FY01, the total amount of tuition paid from all sources was \$16.6 million for 1,600
1766 graduate students. We must develop a financial model that will remove tuition as a
1767 barrier when funded investigators consider seeking support from sponsors for research
1768 assistantships versus postdoctoral fellows. The IDS tax structure is also an issue in
1769 this regard. Finally, the new associate provost for graduate education should examine
1770 the current 72 hour credit requirement for students pursuing the Ph.D.
- 1771 • Costs of replacing tuition charges and appropriate incentives for P.I.s to be
1772 determined.

1773

1774 **2. Endowment for Graduate Fellowships**

- 1775 • Targets for the capital campaigns of the various schools include:
 - 1776 • Arts and Science = \$10 million
 - 1777 • Peabody = \$9 million
 - 1778 • Engineering = \$8 million
 - 1779 • Divinity = \$1.5 million

1780

1781 **3. Increase faculty lines to support the instructional programs of Peabody,**
1782 **Engineering, and Arts and Science**

- 1783 • Many faculty members are currently stretched to the limit to cover the undergraduate
1784 instructional needs of the College of Arts and Science, Peabody College and the
1785 School of Engineering. Little remains of faculty time to mentor graduate students and
1786 to support graduate-level courses. To strike a healthier balance between

1787 undergraduate and graduate education, additional faculty positions must be funded in
1788 the coming decade.

- 1789 • Costs to be determined

1790

1791 **4. Facilities required to support graduate education**

- 1792 • Several graduate programs in University Central lack acceptable facilities for
1793 accommodating students and supporting scholarly activities. This is especially true in
1794 the humanities and social sciences. Attention should also be directed to expansion of
1795 laboratory space for the biomedical, engineering and physical sciences.

- 1796 • Costs to be determined.

1797

1798 **5. Additional infrastructure concerns**

- 1799 • In addition to laboratory space, improvements to the Library (after all, a first-class
1800 research library is essential to an excellent graduate school), addition of more office
1801 space for graduate students, even housing may all pose significant challenges to
1802 Vanderbilt's infrastructure. *To ascertain better the extent of these needs, we*
1803 *recommend that the provost commission a study of how effectively our present*
1804 *infrastructure matches our ambitions for research-driven graduate education.*

1805

1806 A quick scan of the list of possible investments in graduate education leads to a total of more
1807 than \$10 million in new funding annually within University Central. This figure excludes the
1808 personnel costs for the Office of the Associate Provost for Graduate Education and the costs for
1809 recruitment coordinators. As daunting as this figure might appear at first viewing, an annual
1810 budget increment of \$10 million equates to roughly three percent of combined University
1811 Central school budgets and roughly .6 percent of the total University budget. These
1812 comparisons give us cause for hope that the strategies that make for excellence are within
1813 Vanderbilt's reach.

1814

1815 **Conclusion**

1816

1817

1818 The mark of a great university is the palpable spirit of people learning. Students and faculty who
1819 thirst for knowledge, who desire to know "why?" and people who excite in fresh discovery
1820 characterize the ethos of great schools. Though each university will have unique strengths and
1821 not every program can be equally strong, the intellectual quality of the parts of a university is
1822 indivisible from its intellectual quality as a whole. Great undergraduate education, professional
1823 schools, and excellence in faculty research are not possible in a community that does not value,
1824 and even prioritize, graduate education. Now is the fitting moment to attend to graduate
1825 education to build the best Vanderbilt possible. We hope that this report will guide and inspire
1826 our collective best efforts to realize the full promise of graduate education in a great university.

1827

1828

1829 Reference

1830

1831 Noe, R.A. (1988). An Investigation of the Determinants of Successful Assigned Mentoring
1832 Relationships. Personnel Psychology, 41, 457-479.

Appendix A

Graduate Student Portfolio System: Schematic Outline of Data

1833	
1834	
1835	
1836	Seed Data from Student Records
1837	
1838	1. Social Security Number
1839	2. Name
1840	3. Citizenship
1841	4. Place of Birth
1842	5. Race
1843	6. Department
1844	7. First Term
1845	8. GRE Scores V, Q, A
1846	9. GRE Advanced General Type and Score
1847	10. Prior Institutions and Degrees (detail field)
1848	
1849	Recurring Data from Student Records
1850	
1851	1. Degree earned and term (detail field)
1852	2. Semester, courses, grades, hours (detail field)
1853	
1854	Portfolio Data
1855	
1856	1. Major, minor (update tracking with dates)
1857	2. Advisor (update tracking with dates)
1858	3. Qualifying exams, area, date, and result (detail field)
1859	4. Publications - title, publication, order of authors, date (detail field)
1860	5. Presentations - title, place, order of authors, date (detail field)
1861	6. Grants and Contracts - title, source, order of PI's, amount, date, term (detail field)
1862	7. Awards - name, source, date, amount (detail field)
1863	8. Recitation Courses - course#, name, semester (detail field)
1864	9. Courses Taught - course#, name, semester (detail field)
1865	
1866	Professional Experience
1867	
1868	1. Professional Experience - description, date (detail field)
1869	2. Post Doc - area, institution, date
1870	3. Faculty Position - area, type (TT, NTT), rank, institution, date
1871	4. Non-Academic Position - employer, title, date.
1872	
1873	Note: Detail field may have multiple date sensitive entries with same format. Update tracking
1874	should identify the initial status and date as well as any subsequent changes.

1875 **Appendix B**

1876 **How Graduate Programs Are Ranked and Evaluated by the National Research Council**

1877
1878 *The Chronicle of Higher Education*

1879 Survey of Doctoral Programs Should Include More Fields and Opinions of Students, Panel
1880 Suggests

1881 By JEFFREY BRAINARD

1882 Washington

1883
1884 A National Research Council panel proposed big changes this week in the methodology of its
1885 next survey of research-doctorate programs, to be completed in 2005. The report, which is the
1886 definitive ranking of doctoral programs in the United States, would expand to 57 from 41 the
1887 number of academic fields the survey covers and track "emerging" scholarly areas, such as
1888 gender studies and nanoscience. The panel is also mulling other significant modifications. One
1889 would report the quality of doctoral programs as falling within a certain range, rather than as a
1890 numerical rank. The aim is to deter university officials from fixating on minor differences in
1891 numerical rankings among programs. Another change under consideration would put greater
1892 weight on quantitative measures of departments' educational quality, some of which could be
1893 based on surveys of graduate students. The survey is considered an authoritative source about
1894 the quality of individual academic departments, and the council conducts it only about once a
1895 decade. The last was published in 1995. Many universities put a premium on boosting their
1896 departments' rankings. The scores generally command more respect in academe than those of
1897 U.S. News & World Report because they are based on a wider scope of data, including the
1898 collective judgments of scholars in each field studied. The report covers disciplines within the
1899 life, physical, and social sciences, and the humanities.

1900
1901 A panel of the council that is examining the survey's methodology posted details about some of
1902 its proposals on Wednesday on the World Wide Web. The panel is requesting comments by
1903 March 1. Other details will not be finalized until after the council completes pilot studies of the
1904 proposed changes at nine universities in March. "The methodology committee is definitely on
1905 the right track, and I think graduate deans are very supportive of the approach they're taking,"
1906 said Debra W. Stewart, president of the Council of Graduate Schools.

1907
1908 The 57 fields to be studied represent an increase of about 40 percent over the 41 studied in the
1909 1995 survey. One field, oceanography, which appeared in the 1995 survey, would be subsumed
1910 under geoscience in the new version. In addition, there are 17 newcomers, which the panel
1911 concluded have emerged as distinct fields in academe since the last version. They are
1912 agricultural economics, American studies, animal sciences, applied mathematics,
1913 communications, developmental biology, East Asian literatures, entomology, food science and
1914 food engineering, immunology, microbiology, molecular biology, Near Eastern literatures,
1915 nutrition, plant sciences, Slavic literatures, and theater and performance studies. Two of these
1916 fields, molecular biology and developmental biology, were named as part of other categories
1917 covered in the 1995 report.

1918 The council panel also proposes to gather and report data about other "emerging" fields in
1919 academe but will probably not rank them, said Charlotte V. Kuh of the research council, who is
1920 the survey's director. They include bio-informatics; cognitive studies; computational biology;
1921 feminist, gender, and sexuality studies; genomics; nanoscience; and race, ethnicity, and
1922 postcolonial studies. These fields "are important and not particularly large now, but may be in
1923 the future," she added. Depending on the institution, they "may or may not exist as identifiable
1924 doctorate programs. They're sometimes subfields. ... We're not likely to do reputational
1925 rankings on them because they're relatively new."

1926
1927 The panel also wants suggestions from scholars about subfields within disciplines that have
1928 produced "a significant body of research." The panel hopes to use the suggestions to ensure
1929 proper balance among the scholars who are surveyed for the rankings, Ms. Kuh said. "If there
1930 are particular subfields that we're missing, we want to be sure we know what's out there."

1931
1932 Other proposed changes would affect how the survey would be conducted and reported. The
1933 panel is considering reporting each department's quality within a range, replacing the
1934 numerical rankings used in previous surveys. Those rankings were not necessarily precise
1935 measurements of quality, although many people have interpreted them that way, Ms. Kuh said.
1936 Ms. Stewart agreed, adding that "the rank ordering is meaningless when two departments rank
1937 37th and 38th in a field that has rankings for 90 programs."

1938
1939 Another change under consideration by the panel would reduce the survey's reliance on
1940 subjective evaluations by graduate-faculty members of the educational quality of the doctoral
1941 programs. In previous surveys, each department's score was influenced heavily by these
1942 assessments and by the survey respondents' judgments about the "scholarship quality" of the
1943 programs' faculty. Scholars are more likely to know the research accomplishments of colleagues
1944 at other institutions than the details of education offered there, Ms. Stewart said. The panel
1945 proposes to collect more quantitative information about programs' educational success, which
1946 could be based in part on surveys of graduate students. These questions might cover details
1947 about students' research training, the information they used to choose the doctoral program
1948 they attended, and topical areas about which they would have liked more instruction. The
1949 survey may also collect information about financial support for students and the time they
1950 spent earning degrees. However, the student surveys will probably not solicit subjective
1951 assessments of overall satisfaction, Ms. Kuh said. Some of this information would appear in the
1952 survey report, but the panel has not yet decided whether to use it to help generate the quality
1953 ratings for graduate programs.

1954
1955 Graduate-school deans generally support gathering more information about the educational
1956 quality of doctoral programs, Ms. Stewart said. However, incorporating it into the council's
1957 methodology will be difficult because educational quality cannot easily be boiled down to
1958 numbers. "My guess is we're not going to get everything we want [in the council's survey], but
1959 we'll definitely move forward and get more information about students' experiences," she said.
1960

1961 The pilot studies of the new methodology are scheduled to begin soon and end by March. The
1962 institutions are: Auburn University, Florida State University, Michigan State University,
1963 Rensselaer Polytechnic Institute, Yale University, and the Universities of California at San
1964 Francisco, Maryland at College Park, Southern California, and Wisconsin at Milwaukee.
1965 The panel expects that the full-scale survey would begin in the fall of 2003 and be published in
1966 2005.