

Changing Pathways at Miami University:
Adapting to Emerging Developments in Higher Education

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Table of Contents

Executive Summary

1. What is the national and state context?
2. What changes have been observed?
3. How should Miami University re-define itself?
4. What opportunities should Miami University pursue? What are the next steps?

Appendix A: Charge to the Committee

Appendix B: Membership

Appendix C: Getting MU credit from AP classes

Appendix D: Course sequence typical of students' degree progression

Appendix E: Briefing notes used for April 14, 2010 presentation of Pathways recommendations to Faculty Assembly

EXECUTIVE SUMMARY

1. What is the national and state context?

National movements in higher education are ensuring broader portability of credits that enable faster time to graduation. Portability of credits, Advanced Placement (AP), passing grades (redefined from the traditional “C” or better) – all enable students to receive credit outside of studying in residence at a campus. Students are completing degree requirements in a variety of ways– coursework taken at their “home” institution vs. elsewhere – including study abroad, transfer credit from other institutions, credit by examination, on-line courses, and in some cases, experiential learning. In addition, the University System of Ohio (USO) is defining a new educational paradigm for all institutions in Ohio, and is linking resource support to USO initiatives. Implicit in the USO initiatives is that each institution has a role to fill and no institution can fill all roles.

Miami needs need to respond to these trends and developments as an opportunity.

An Association of American Colleges and Universities 2010 report (AACU "Raising the Bar") tells us that "employers want their employees to use a broader set of skills and have higher levels of learning and knowledge than in the past to meet the increasingly complex demands that they will face in the workplace" and that "employers believe that colleges can best prepare graduates for long-term career success through a blend of liberal and applied learning."

2. What changes have we observed at Miami?

An empirical evaluation of changes and impact at Miami has begun and should continue. The number of courses for which AP credit has been earned has increased recently due to a recent Ohio Board of Regents mandate. A preliminary investigation of student performance in calculus and in English composition suggests that AP 3 credit does not necessarily result in differential performance in subsequent classes where AP credit was earned for a prerequisite class. One concern that remains is that four of the top five classes where AP credit is earned are in the humanities. The question of whether students receiving humanities AP credit take additional humanities courses at Miami remains. Additionally, it is too early to evaluate the impact of transfer credit on later coursework taken at Miami.

3. How should Miami University re-define itself?

The nature of college education and the pathways that students choose to secure a college degree are changing rapidly: The model upon which Miami University is based — a student receiving an undergraduate degree after four years of in-residence study — is being challenged as the standard. What we are seeing instead is that Miami students choose various pathways to a degree and build their own distinctive programs. Student “pathways” to graduation will be varied, and students should be supported and advised on how to get the most out of their Miami education. The "Miami experience" for students needs to be clearly articulated. A blending of knowledge acquisition and application/liberal education and practice may be a key to defining this, and we expect that this will be the focus of discussion on campus and in the LEC. Flexibility in

undergraduate study should be promoted by reducing barriers for students doing “two things,” such as dual degrees, co-majors, combined bachelors-masters degrees.

We want the educational experience at Miami to enrich our students in multiple ways. This variety will represent what they bring to us prior to their Miami admission, as well as those non-Miami experiences during their time with us including study abroad, and courses taken during their summers at home. We believe that value can be added to a student's educational experience in different ways. We need to provide a broad spectrum of interesting and exciting opportunities for our students. We believe that experiences at Miami can provide greater value and a richer educational experience with faculty at Miami University, rather than taking coursework and pursuing educational opportunities elsewhere. We believe that our challenge here is one both of substance and perception. First and foremost, a Miami education does need to provide greater educational quality and value than can be obtained elsewhere. But the quality and value also need to be evident to others: the quality and value must be identified and promoted; it needs to be clear to students (and parents and employers, etc.) that there is greater quality/value here. Miami needs to be proactive and promote these opportunities.

4. What opportunities should Miami University pursue? What are the next steps?

Miami University needs to work to retain its reputation for a strong liberal arts education and enhance this reputation by becoming known as a university that encourages students to pursue a distinctive and rich program of study by developing each student's interests. Miami should aspire to be recognized within the state and the nation as a top public university for undergraduate study and selected graduate study.

The PATHWAYS committee emphasizes opportunities and proactive responses to the changing context of higher education. Common themes underlying committee recommendations include the promotion of flexibility in undergraduate student studies. Implicit in the advocacy of flexibility is removing institutional barriers rather than creating mandates for divisions and departments.

RECOMMENDATION: Miami should continue to monitor and assess student performance in courses following receipt of credit in prerequisite courses received from a variety of different sources (e.g., AP, transfer).

RECOMMENDATION: Miami students on all campuses should be encouraged, and provided sufficient advising, to explore a variety of opportunities during their time on campus. These include:

- * studying abroad
- * participating in service-learning opportunities
- * enrolling in dual programs
- * getting dual majors
- * getting second / double majors or second degrees or co-majors
- * pursuing internship experiences
- * working on, or even finishing, combined undergraduate-graduate programs

- RECOMMENDATION: Miami should expand and promote co-majors in addition to reviewing current dual majors and dual degree opportunities. These represent a way to coordinate studies of topics across departments and divisions.
- RECOMMENDATION: Miami should expand the number of graduate degree programs offered, especially Master's degrees.
- RECOMMENDATION: Miami should provide coordinated advising of students with varying degrees of non-residential credit is critical for addressing the different sets of student admission "packages" to Miami and for facilitating flexibility in student undergraduate study. The advising community might consider creating a dual advising assignment for AP Scholars, e.g., first year adviser and a divisional or faculty adviser. These students, although technically not freshmen, still will benefit from the developmental perspective of the first year advising model, but also will need the academic guidance with the depth of the division, department, or program.
- RECOMMENDATION: Recognizing that divisions may differ in their perspectives regarding core knowledge in different domains, Miami should actively promote all of the feasible opportunities beyond obtaining a single baccalaureate degree within the traditional residency of four years, including dual degrees, dual majors, minors, and more.
- RECOMMENDATION: Liberal education needs to be re-examined as a consequence of students filling requirements with non-Miami coursework. In addition, divisions, departments, and programs are encouraged to revisit their divisional requirements.
- RECOMMENDATION: Miami will pursue ways to recognize and support students who enter with large numbers of AP credits- for example, institute a special designation of "AP Scholars" for students who enroll in Miami with numerous AP credits; provide scholarship support; develop an AP Scholar learning community or an AP Scholars first year seminar. It may also be useful to make special advising arrangements for these students. First-year residence hall advising may not be the best way for them to discover the range of academic opportunities available to them.
- RECOMMENDATION: Miami University needs to develop and promote alternative institutional structures for delivering education, including (but not limited to) expanding study abroad opportunities, offering more summer courses, developing online courses in areas where that is feasible and appropriate, offering more service-learning,

internships, professional certificates, and experiential learning opportunities, and expanding our offerings regionally, even nationally.

The last four recommendations relate to specific changes to address as part of the process in obtaining a Miami degree.

RECOMMENDATION: Initiate a review of the minimum number of hours required for graduation with a consideration of changing from 128 hours to 120 (recognizing that accreditation and degree requirements may lead to more than 120 hours for some majors).

RECOMMENDATION: Increase residency requirement from 32 baccalaureate hours earned from Miami to 45 hours (with a corresponding percentage for associate degrees). We also should review the “terminal residency” requirement of 12 of the last 20 credit hours being earned at Miami.

RECOMMENDATION: Allow for 15 hours of graduate coursework to count for combined bachelors-masters degree study.

RECOMMENDATION: Evaluate the two-year on-campus living/ “Sophomore Residency Requirement” requirement. An alternative would be to reduce this requirement to one year.

1. What is the national and state context?

1.1 Employers are increasingly vocal about the broadening sets of skills and learning outcomes which college graduates should possess

“Raising the Bar” is a report published in January of 2010 for the Association of American Colleges and Universities. The report indicates that “employers want their employees to use a broader set of skills and have higher levels of learning and knowledge than in the past to meet the increasingly complex demands that they will face in the workplace” and that “employers believe that colleges can best prepare graduates for long-term career success through a blend of liberal and applied learning.” Miami University already promotes the intellectual and practical learning that this report calls for, i.e., the ability to communicate effectively, critical thinking and analytical reasoning skills, teamwork skills, and the ability to innovate and be creative. We should emphasize and strengthen what Miami already does well, but we need to do a better job of promoting it and demonstrating to those outside the University that Miami students have precisely the kind of academic preparation that prepares students for their future work, civic and home life.

1.2 National movements in higher education are ensuring broader portability of credits, including transfer credits and Advance Placement scores, thus enabling faster time to graduation

Miami should facilitate students finishing early, but should not develop special 3-year programs. Schools which have explicit 3-year programs are typically small with labor-intensive advising. They require summer sessions or inter-term sessions, and require students to take more hours per semester. An important part of the Miami experience is involvement in extra-curricular activities, developing leadership skills, and special co-curricular learning opportunities, such as internships, independent research, co-majors, and service learning courses. These are an important part of the Miami experience, necessitating adequate time in residence.

1.3 Students are completing degree requirements in a variety of ways—coursework taken at their “home” institution vs. elsewhere, including study abroad, credit by examination, and experiential learning--and we need to respond positively to the opportunity that this affords.

Miami should increase flexibility in students’ individual plans of study to accommodate increasing transfer credit, AP credit, study abroad, and the like. To facilitate flexibility, the student and appropriate advisors and mentors must play active, collaborative roles in planning how, in a coherent way, to complete undergraduate requirements, double degrees, second majors, co-majors, study abroad opportunities, internships, service learning or, in select fields, combined Bachelors-Masters degrees.

1.4 University System of Ohio (USO) is defining a new educational paradigm for all institutions in Ohio, and is linking resource support to furthering USO initiatives.

It is important that Miami actively integrate into the Ohio context, especially the University System of Ohio (USO). This has already been recognized in the Report of the Regional Campus Committee of 2008. USO suggests that higher education in Ohio should be a high quality, flexible system with the lowest costs. USO initiatives, such as course credit for a score of 3 on AP exams, transfer of all passing-grade credits, dual admitted high school students and seniors-to-sophomores programs, need to be monitored for impact. Miami should find appropriate measures to turn these USO requirements into opportunities.

1.5 Each institution has a role to fill and no institution can fill all roles

Miami should identify our various niches, and market those niches, within the USO and nationally, including experiences at our regional campuses, the VOA Learning Center, and on the Luxembourg campus. An institution cannot be all things to all students. We should increase emphasis on specific learning outcomes, knowledge and capacities that are cognizant of preparing students for the next step in their professional development, whether employment or further education. Key to this recommendation is working with Chancellor Fingerhut and others from USO.

2. What changes have we observed at Miami?

We start with the current experience of two of our students.

A biochemistry major came to the university with 41 AP hours. He brought the whole first year of introductory chemistry and calculus I and II in through AP, but delayed taking the organic chemistry until his second year. This apparently gave him time to start taking some history honor's seminars. So in his second year he added history as a second major. He also started at the 300 level in Spanish and has had time to add a third major in Latin American Studies and a minor in Spanish. He chose to be here the whole 4 years and will graduate with 174 credit hours with 3 majors and 2 minors. In his current and final semester he is registered for 19 credit hours including Broomball and Social Dance for Men.

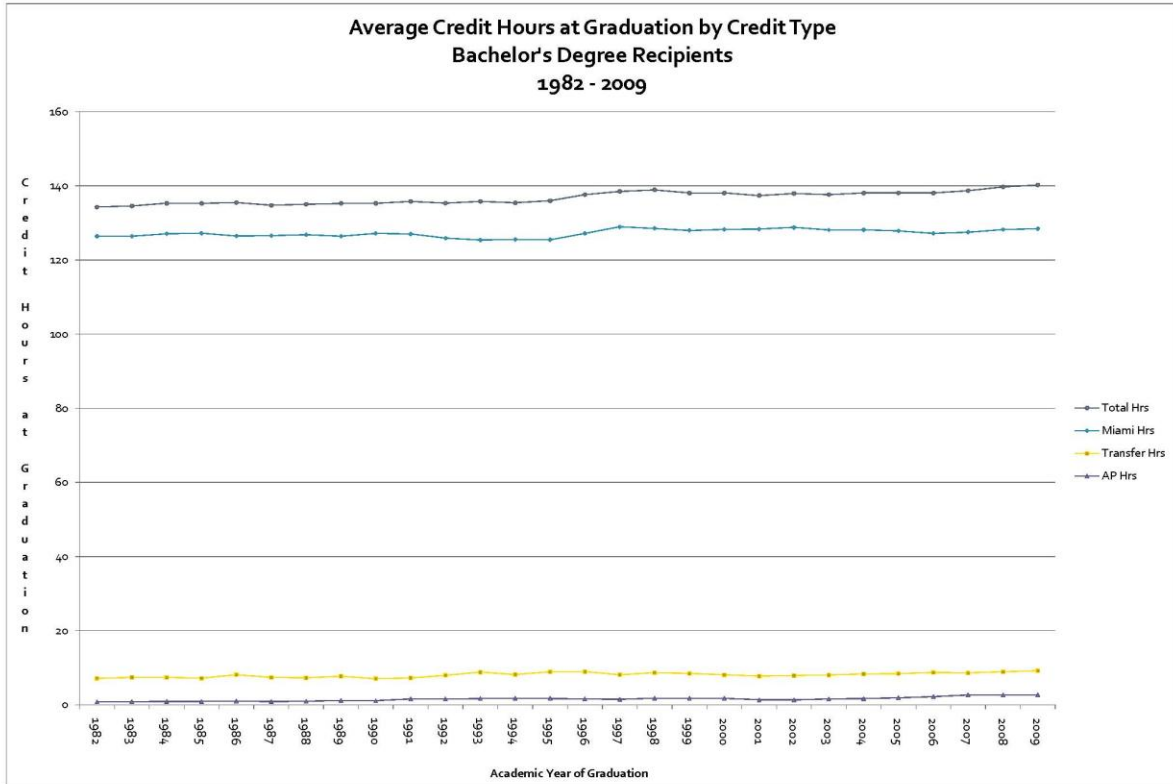
A student who graduated in December 2009 had a major in Journalism with a co-major in IMS. He was getting a traditional journalism degree, but also building skills and technical knowledge in new media, so that he could work in "new media journalism" and write and publish in new media venues. In a senior independent study project, he explored the economic problems facing traditional news media, and particularly investigative reporting, with the aim of determining how news media can survive economically in the age of free information: What happens to news services and to the quality of reporting if people no longer subscribe to newspapers? He did a comparative case study examining why some news outlets were failing (e.g., San Francisco Chronicle) and others succeeding, to determine what revenue model/s might work best to support news media. This dual major prepared him for challenges journalists in this new media era.

Finally, in the words of one of our students ...

"Junior year I took three AP classes, but was bored with high school. Therefore, senior year I decided to do a program called The Advanced Academy, where you are jointly enrolled in high school and college, and you live on campus and take all college classes. Upon graduation from high school and The Academy, I had 40 credits under my belt, and Miami took them all. At Miami I am double majoring in theatre and physics because I love both subjects. Also, if acting does not work out, I will have a strong background in something else. From the credit I earned at The Academy, I was already considered a sophomore in my Physics major and most of my Miami Plan was complete, which allowed me to catch up in my theatre major. Also, I took a couple classes online over the summer, so that I could devote a whole semester to studying abroad in London for theatre. Juggling the two majors is difficult because they are so different, but with my Miami Plan complete, I can more easily divide my time. Graduating in three years will allow me to attend graduate school sooner, if I choose to, and will save my family and me a lot of money."

These case studies motivate the following examination of the profile of Miami students graduating between 1982 and 2009. In Figure 2.1, the average number of total hours earned is plotted versus graduate year. In addition, the constituent components (Miami hours, transfer hours, AP hours) are displayed.

Figure 2.1: Profile of graduating Miami students (1982-2009). Average number of total hours, Miami hours, transfer hours and AP hours are displayed.



Average AP Hours went from 0.8 to 2.6 during 1982-2009, average Transfer hours went from 7.1 to 9.2, and Miami hours remained largely unchanged, 126.4 to 128.4. We believe that this provides a baseline to investigate the changes in hours earned by AP and transfer; however, this pattern of changes may increase in upcoming years.

What types of courses are receiving credit based on AP?

Miami offers credit for a number of courses including Miami Plan courses based on performance on AP tests (see Appendix C for examples). From Table 2.1, we see that the number of students receiving credit for courses that are part of the Miami Plan (MP) increased from 2009 to 2010 after maintaining a relatively constant level during 2007-2009. This change may be even more dramatic given the smaller entering class in 2010 relative to 2009. The 735 students receiving AP English credit in 2010 represent an 80% increase over the 407 students receiving credit in 2009. Note that receiving credit does not mean students will not take additional coursework in a particular area but that they may be opt out of additional courses. One possible explanation for the recent increase in AP course credits is that the Ohio Board of Regents mandate for granting credit for AP=3 scores took effect in the Fall of 2009.

Table 2.1: Number of Miami Plan course requirements satisfied with AP credit (Fall of Years 2007-2010)

Attr. Code	Attr. Desc	2007	2008	2009	2010
I	FND - English	440	397	407	735
IIA	FND - Fine Arts	52	54	34	41
IIB	FND - Humanities	767	682	700	1,185
IIC	FND - Social Science	399	476	471	815
IIIA	FND - US Cultures	624	514	544	766
IIIB	FND - World Cultures	118	156	171	294
IVA	FND - Biological Science	199	178	157	218
IVB	FND - Physical Science	237	216	238	408
V	FND - MTH, Formal Reason, Tech	543	423	453	625
Total		3,379	3,096	3,175	5,087

Implications of this pattern are discussed in the next section while the impact on future courses is discussed in subsequent sections of this report.

It is appropriate to ask if students receiving AP or transfer credit in a prerequisite course perform at the same level as student who took the prerequisite course while in residency at Miami. We examined this pattern for ENG 112 and MTH 249/251 in Tables 2.2 and 2.3, respectively. We consider the ENG 112 grades in Spring 2009 for students who took ENG 111 in Fall 2008 (see MU A – MU X rows), and compared this to students who took ENG 112 in Fall of 2010 after receiving AP or transfer credit for ENG 111 (see AP or TR rows).

Table 2.2: Student performance in ENG 112 in Fall of 2009 stratified on whether they took ENG 111 at Miami or received AP/transfer credit for ENG 111.

ENG 112 Grade - Spring 2009									
ENG 111 Grade	A	B	C	D	F	I	W	X	Students
MU A	74.8%	19.7%	3.0%	0.8%	0.5%		1.2%	0.0%	2,394
MU B	42.0%	34.3%	11.4%	2.7%	4.8%		4.4%	0.3%	877
MU C	15.6%	35.7%	19.6%	8.0%	9.4%		11.6%		224
MU D	10.8%	20.0%	18.5%	4.6%	38.5%		7.7%		65
MU X							100.0%		1
Total	61.8%	24.3%	6.4%	1.8%	2.8%		2.8%	0.1%	3,561

ENG 112 Grade - Fall 2009									
ENG 111 Grade/Score	A	B	C	D	F	I	W	X	Students
AP ENG LANG COMP 3	88.6%	6.8%		2.3%	2.3%				44
AP ENG LANG COMP 3 ENG LIT COMP 3	100.0%								16
AP ENG LANG COMP 3 ENG LIT COMP 4	100.0%								1
TR A	73.3%	16.7%			10.0%				30
TR A A	75.0%	25.0%							4
TR A B B		100.0%							1
TR A C	33.3%	33.3%			33.3%				3
TR B	61.9%	14.3%	4.8%	4.8%	9.5%	2.4%	2.4%		42
TR B A	66.7%		33.3%						3
TR B B	71.4%	14.3%	14.3%						7
TR B C		80.0%	20.0%						5
TR C	23.1%	38.5%	15.4%		7.7%		15.4%		13
MU A	56.3%	21.4%	8.0%	2.7%	5.4%	0.9%	5.4%		112
MU B	30.6%	26.4%	19.8%	4.1%	13.2%		5.8%		121
MU C	14.5%	23.7%	22.4%	3.9%	15.8%		19.7%		76
MU D	6.9%	13.8%	17.2%	3.4%	34.5%	3.4%	20.7%		29
MU X							100.0%		1
Total	42.3%	20.3%	13.8%	3.3%	11.3%	0.5%	8.8%	0.0%	400

One caution for this and subsequent comparisons is that there are relatively few students in a number of these groups (e.g. 44 students received AP ENG LANG COMP scores of 3 and 42 students transferred credit earning a “B” in an ENG 111 equivalent). The pattern in Table 2.2 suggests that AP 3 students did quite well in ENG 112 (89% earning an “A” and 7% earning a “B”) which was better than students earning an “A” in ENG 111 (56% of MU A students earned an “A” in ENG 112, 21% earned a “B”), or transferring an “A” (73% earned an “A” in ENG 112, 17% earned a “B”).

TENTATIVE CONCLUSION:

Based on performance in ENG 112, AP 3 students did better than their MU ENG 111 or transfer credit counterparts. Further, students receiving transfer credit had comparable, if not slightly better, performance in ENG 112 when compared to students who took ENG 111 in residence at Miami. Upon reflection, the AP student performance may not be a surprise. Students taking AP classes in high school self-select into these classes and thus tend to be highly motivated. In addition, high schools with stronger academic traditions may have more AP course opportunities. Thus, a student receiving AP 3 credit for ENG 111 is more likely to receive a higher grade in ENG 112 than receiving an “A” in ENG 111.

We examine an analogous table for Calculus II (MTH 249/251 performance) as a function of the source of Calculus I (MTH 151 credit).

Table 2.3: Student performance in MTH 249/251 (Calculus II) in Fall of 2009 stratified on whether they took MTH 151 (Calculus I) at Miami or received AP/transfer credit for MTH 151.

MTH 249/251 Grade Spring 2009									
MTH 151 Grade	A	B	C	D	F	I	W	L	Students
MU A	46.2%	39.6%	7.5%	5.7%			0.9%		106
MU B	4.1%	34.0%	33.0%	8.2%	6.2%		13.4%	1.0%	97
MU C		8.5%	44.7%	10.6%	17.0%		19.1%		47
MU D			50.0%				50.0%		4
Total	20.9%	31.1%	24.8%	7.5%	5.5%		9.8%	0.4%	254

MTH 249/251 Grade Fall 2009									
MTH 151 Grade/Score	A	B	C	D	F	I	W	L	Students
AP CALCULUS AB 3	45.5%	18.2%	9.1%	18.2%			9.1%		11
AP CALCULUS AB 4	38.5%	26.9%	23.1%		3.8%		7.7%		26
AP CALCULUS AB SUB 4	50.0%						50.0%		2
AP CALCULUS AB 5	53.8%	33.3%	7.7%	2.6%		2.6%			39
AP CALCULUS AB 4 CALCULUS AB SUB 4 CALCULUS BC 3		100.0%							1
AP CALCULUS AB 4 CALCULUS AB SUB 5 CALCULUS BC 4	100.0%								1
AP CALCULUS AB SUB 4 CALCULUS BC 3	25.0%	75.0%							4
AP CALCULUS AB SUB 4 CALCULUS BC 4	100.0%								1
AP CALCULUS AB SUB 5 CALCULUS BC 4	66.7%	33.3%							3
AP CALCULUS AB SUB 5 CALCULUS BC 5	100.0%								3
MU A	39.4%	21.2%	21.2%	6.1%	9.1%		3.0%		33
MU B	2.6%	13.2%	34.2%	13.2%	21.1%		15.8%		38
MU C			15.8%	15.8%	21.1%		42.1%	5.3%	19
MU X	100.0%								1
TR A			100.0%						1
TR A A B	100.0%								1
TR B			50.0%				50.0%		2
TR C				25.0%	25.0%		50.0%		4
TR Unknown Grade	50.0%	50.0%							2
no 151 credit found	44.1%	29.4%	11.8%	2.9%			11.8%		34
Total	34.1%	22.1%	17.3%	6.6%	7.5%	0.4%	11.5%	0.4%	226

Tentative Conclusion:

With only 11 students receiving AP 3 credit for MTH 151, we don't want to over-interpret patterns in this table. At this time with these small numbers, we do not believe that a comparison between different sources of Calculus I credit is warranted. We do note that stronger

performance in MTH 151 (MU A vs. MU B or MU C) is associated with stronger performance in the subsequent course MTH 249 or MTH 251.

The grade distribution in DSC 205 or ECO 201 for students stratified by source of credit for MTH 151 is presented in Tables 2.4 and 2.5, respectively. The number of students with AP 3 MTH 151 credit is too small for interpretations to be meaningful. The grade distribution in DSC 205 or ECO 201 was somewhat lower for the TR A/TR B students when compared to MU A/MU B students.

While we believe these types of comparisons are useful, we caution that confounding factors are not considered (e.g. student class, student overall GPA) which could impact grades. Ultimately, we do not have evidence that AP 3 credit for prerequisite courses translates into poor performance in later classes.

Table 2.4: Student performance in DSC 205 in Fall of 2009 stratified on whether they took MTH 151 (Calculus I) at Miami or received AP/transfer credit for MTH 151.

MTH 151 Grade/Score	DSC 205 Grade										# Students
	A	B	C	D	F	I	L	W	X	Y	
AP CALCULUS AB 3	100.0%										1
AP CALCULUS AB 4	48.5%	36.4%	12.1%					3.0%			33
AP CALCULUS AB 5	30.0%	50.0%	10.0%		10.0%						10
AP CALCULUS AB 5 CALCULUS AB SUB 4 CALCULUS BC 4		100.0%									1
AP CALCULUS AB SUB 4 CALCULUS BC 3	100.0%										2
AP CALCULUS AB SUB 4 CALCULUS BC 4	33.3%	66.7%									3
AP CALCULUS AB SUB 5 CALCULUS BC 5	100.0%										1
AP CALCULUS BC 3			100.0%								1
MU A	58.7%	33.9%	2.8%			1.8%	0.9%	1.8%			109
MU B	15.1%	53.5%	21.4%	3.8%	0.6%	1.3%		4.4%			159
MU C	10.4%	45.3%	29.2%	6.6%	1.9%			6.6%			106
MU D	19.4%	22.6%	32.3%	6.5%	9.7%			9.7%			31
TR A	45.5%	27.3%	18.2%	9.1%							11
TR A A	100.0%										1
TR B	25.0%	50.0%		12.5%				12.5%			8
TR C	17.6%	41.2%	35.3%	5.9%							17
TR C B			100.0%								1
TR C C		100.0%									1
TR Unknown Grade	55.6%	11.1%	22.2%					11.1%			9
No MTH 151 Grade Found	38.3%	43.3%	13.3%	1.7%				3.3%			60
Total	29.7%	42.3%	18.2%	3.4%	1.2%	0.7%	0.2%	4.2%			565

Table 2.5: Student performance in ECO 201 in Fall of 2009 stratified on whether they took MTH 151 (Calculus I) at Miami or received AP/transfer credit for MTH 151.

MTH 151 Grade/Score	ECO 201 Grade										# Students
	A	B	C	D	F	I	L	W	X	Y	
AP CALCULUS AB 3	16.7%	50.0%	16.7%					16.7%			6
AP CALCULUS AB 4	23.2%	53.6%	17.9%	3.6%				1.8%			56
AP CALCULUS AB 5	26.3%	60.5%	7.9%	2.6%				2.6%			38
AP CALCULUS AB 5 CALCULUS AB SUB 4 CALCULUS BC 4	100.0%										1
AP CALCULUS AB 5 CALCULUS AB SUB 5 CALCULUS BC 5	50.0%	50.0%									2
AP CALCULUS AB SUB 3 CALCULUS BC 3	100.0%										1
AP CALCULUS AB SUB 4			100.0%								1
AP CALCULUS AB SUB 4 CALCULUS BC 3		100.0%									2
AP CALCULUS AB SUB 4 CALCULUS BC 4	66.7%	33.3%									3
AP CALCULUS AB SUB 5 CALCULUS BC 3			100.0%								1
AP CALCULUS AB SUB 5 CALCULUS BC 4	66.7%		33.3%								3
AP CALCULUS AB SUB 5 CALCULUS BC 5	54.5%	27.3%	9.1%					9.1%			11
AP CALCULUS BC 3	50.0%		50.0%								2
MU A	31.0%	48.2%	16.7%	3.0%				1.2%			168
MU B	10.0%	48.6%	32.3%	6.0%	0.8%		0.4%	2.0%			251
MU C	7.6%	27.5%	46.8%	11.7%	2.9%			2.9%	0.6%		171
MU D	4.2%	31.3%	35.4%	20.8%				6.3%	2.1%		48
TR A	23.1%	42.3%	19.2%					11.5%	3.8%		26
TR B	25.0%	33.3%	25.0%	12.5%				4.2%			24
TR C	7.3%	23.6%	45.5%	16.4%	1.8%			5.5%			55
TR C B			50.0%		50.0%						2
TR C C			100.0%								1
TR P		100.0%									1
TR Unknown Grade	60.0%		20.0%					20.0%			5
No MTH 151 Grade Found	11.7%	28.7%	30.6%	13.4%	6.4%	0.3%		7.7%	1.0%	0.2%	582
Total	14.9%	36.1%	30.3%	9.8%	3.1%	0.1%	0.1%	4.9%	0.6%	0.1%	1,461

3. How should Miami University re-define itself?

The changes in the sources of course credit suggest that the model of a single major received after four years of study in residence may be evolving. The “single degree” still accounts for 87% of degrees issued at Miami (2008-2009); however, our average time-to-degree is less than 4 calendar years. We conjecture that what will/can occur over the 4 years will change based upon what students bring to Miami (transfer, AP, etc.) and what they do while here – study abroad, online, dual majors, minors and more.

Student “pathways” to graduation will be varied, and students should be supported and advised on how to get the most out of their Miami education. The “Miami experience” for students needs to be clearly articulated. A challenge is that the experience differs for each student, so perhaps the ideal is one where students discover/define for themselves, within the context of Miami requirements, a personalized course of study. Miami may have been a “one size fits all” degree structure in the past; however, the future success at Miami may depend on embracing diversity INCLUDING the educational experiences along the way and while at MU – AP, transfer, study abroad, internship, and regional campuses. We need to figure out how to preserve the best of what has kept Miami strong, while defining and embracing change in the future. For many students, the Miami experience will continue to be a residential experience and a broad liberal arts education, but we have to realize that the Miami experience does not have to be a 4 year experience. We need to be open to transfer students and to those students with AP credit who want to graduate in 3 years.

A blending of knowledge acquisition and application/liberal education and practice may be a key to defining this, and we expect that this topic will be the focus of discussion on campus and in the LEC. Flexibility in undergraduate study should be promoted by reducing barriers for students doing “two things,” such as dual degrees, co-majors, combined bachelors-masters degrees.

Miami University: *where you go to receive a flexible, transformative, liberating education.*

We want Miami to be recognized as an institution that provides a strong liberal arts background for preparing students to function as educated adults. The “transformative, liberating education” should reflect a mix of analytical (conceptual) and creative learning, a mix of studying context and constructing new understanding, and a mix of liberal and applied learning. We believe that Miami can achieve an updated liberal arts education tied into work-life preparation.

We want the educational experience at Miami to enrich our students in multiple ways. This variety will represent what they bring to us prior to their Miami admission, as well as those non-Miami experiences during their time with us including study abroad, and courses taken during their summers at home. We believe that value can be added to a student's educational experience in different ways. We need to provide a broad spectrum of interesting and exciting opportunities for our students. We believe that experiences at Miami can provide greater value and a richer educational experience with faculty at Miami University, rather than taking coursework and pursuing educational opportunities elsewhere. We believe that our challenge here is one of both substance and perception. First and foremost, a Miami education does need to provide greater

educational quality and value than can be obtained elsewhere. But the quality and value also need to be evident to others: the quality and value must be identified and promoted; it needs to be clear to students (and parents and employers and all residents of Ohio) that there is greater quality/value here. Miami needs to be proactive and promote these opportunities.

4. What opportunities should Miami University pursue? What are the next steps?

Our working assumptions for the recommendations that follow include the following:

- We want the educational experience at Miami to enrich our students in a variety of ways. This variety will represent what they bring to us prior to their Miami admission, as well as those non-Miami experiences during their time with us.
- We believe that value to a student's educational experience can be added in a variety of ways.
- We need to provide a broad spectrum of interesting and exciting opportunities for our students.
- We believe that experiences at Miami can provide greater value and a richer educational experience with us, with faculty at Miami University, rather than taking coursework and pursuing educational opportunities elsewhere.
- We believe that our challenge here is one both of substance and perception: That is, first and foremost our product does need to provide greater educational quality and value than can be obtained elsewhere. But the quality and value also need to be evident to others: the quality and value must be identified and promoted.
- Miami needs to EMBRACE these opportunities - be PROACTIVE and PROMOTE them.

Miami University needs to work to retain its reputation as providing a strong liberal arts education and enhance this reputation by becoming known as a university that encourages students to pursue a distinctive and rich program of study by developing each student's interests. Miami should aspire to be recognized within the state and the nation as a top public university for undergraduate study and selected graduate study.

The PATHWAYS committee emphasizes opportunities and responding to the changing context of higher education. Common themes underlying committee recommendations include the promotion of flexibility in undergraduate student studies. Implicit in the advocacy of flexibility is the removal of institutional barriers rather than the creation of mandates for divisions, departments, and programs.

RECOMMENDATION: Miami should continue to monitor and assess student performance in courses following receipt of credit in prerequisite courses received from a variety of different sources (e.g., AP, transfer).

We agree that the Ohio system of higher education should be a flexible system that allows students to move across campuses fluidly. But we also worry: Does this mean that all campuses should be comparable in terms of quality? Should comparable courses at different universities be the same in terms of student competency and outcomes? For example, is English 1101 at XYZ

University really "the same course" as ENG 111 at Miami University? If this is the operating assumption behind the credit equivalency effort, then that effort hurts Miami. Why should students pay more at Miami if they can get "the same course" somewhere else cheaper?

There is also potential damage to Ohio students if the system fails to acknowledge that different universities serve different kinds of students with different needs. In making the system more flexible for students, we should be careful not to dilute institutional quality (lower the bar) or to efface important differences between institutions, their missions, and their distinctive student bodies. Standardizing quality across campuses could be especially damaging to Miami University. Is it even possible to "standardize quality?" What does this mean? Courses that share learning outcomes across institutions may not be equally successful in achieving these outcomes. It is important that the Registrar's office and Institutional Research gear up to monitor students at Miami given the various ways in which they may satisfy course credit.

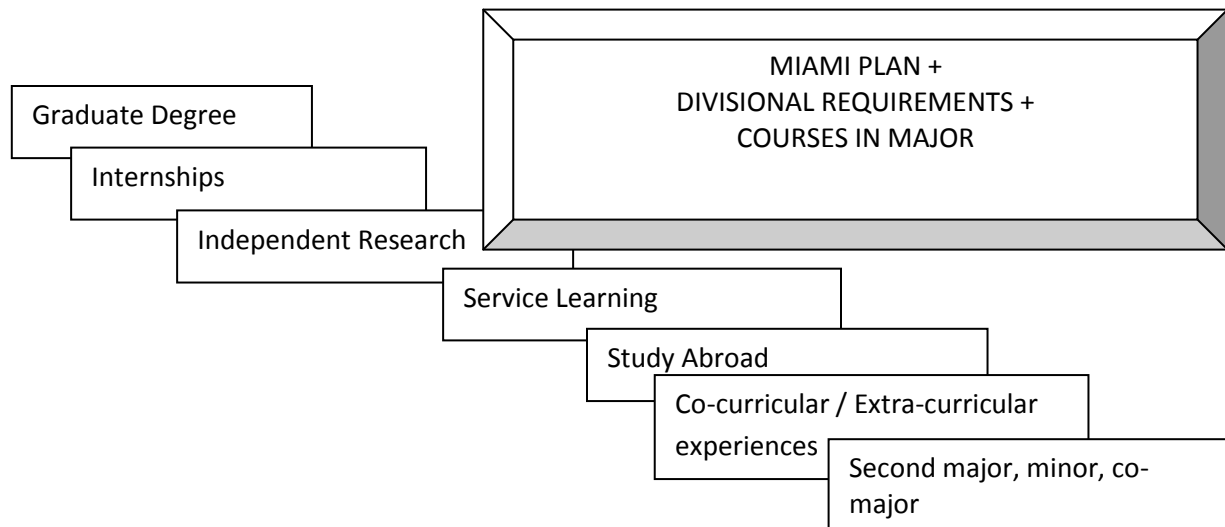
RECOMMENDATION: **Miami students on all campuses should be encouraged, and provided sufficient advising, to explore a variety of opportunities during their time on campus. These include:**

- * **studying abroad**
- * **participating in service-learning opportunities**
- * **enrolling in dual programs**
- * **getting dual majors**
- * **getting second / double majors or second degrees or co-majors**
- * **pursuing internship experiences**
- * **working on, or even finishing, combined undergraduate-graduate programs**

As suggested in Figure 2, a Miami degree can be summarized as a course of study that includes satisfying liberal education requirements and divisional requirements and the course requirements for a major (see framed box in the upper right of Figure 2). The richness of educational alternatives beyond minimal degree requirements includes experiential learning opportunities (e.g. internships, service learning, independent research), study abroad, co-curricular activities and combined undergraduate and graduate degrees.

We believe that double majoring, co-majoring, and flexibility are key ideas for high potential students. Registration issues for co-majors need to be addressed—the system prioritizes registration based on the student's primary major. Miami has already customized the Miami Plan for honors students - should honors experience be the normal student experience? We believe that flexibility in moving between majors – and between divisions - is important. We need to focus on recruiting students to Miami and not just to majors and we need to value minors.

Figure 2: Minimal requirements for a Miami degree along with a partial listing of opportunities to augment undergraduate studies.



Many of our students are already doing this -- e.g., the student co-majoring in journalism and interactive media studies who is examining how journalists need to adapt their work for digital media and addressing the grim fiscal problem of finding a viable revenue model for online news media. We should encourage more students to do this. We should lower barriers for students wishing to pursue this kind of academic work (e.g., make it easier for students to do co-majors and co-major or double major across divisions); and we should promote and advertise our flexibility more prominently.

Departments should be recognized and provided credit for students who double major. Administrative policies need to be addressed to facilitate the ability of students to pursue multiple opportunities as part of their education. Adding and promoting these alternatives may suggest fundamental organizational change at Miami. Does the development of alternative institutional structures for delivering education require organizational change? Do we have the infra-structure to support these efforts- advising, DARS, staffing, marketing? Particular areas that need to be addressed include: study abroad opportunities; summer offerings; online courses; service-learning; internships; professional certificates; experiential learning opportunities; and expanding our regional and national offerings.

RECOMMENDATION: Miami should expand the number of graduate degree programs, especially Master’s degrees.

Currently, Miami is an unusual public institution in the respect that we have a relatively low percentage of graduate students given the overall size of the University. None of our peer or aspirational institutions has a 15:1 ratio of undergraduate students to graduate students. We think that the University should expand the number of graduate programs, but in a strategic way. One strategy for expansion is to build distinctive graduate programs around our Centers for Excellence. Another strategy is to build multidisciplinary and cross-division graduate programs that do not replicate what is already being done well elsewhere but focus on new areas of

knowledge and the application of knowledge. Professional science master's programs provide examples of such programs. We believe that the focus should be on building MA/MS programs, rather than doctoral programs, that can complement undergraduate degrees and allow students to get a combined bachelors-masters degree or to get a BS/MS in a 4+1 model (or even a 3+1 model for students who come with previous college course work and lots of AP credit). A complementary program could reflect undergraduate study in one area and graduate study in another area. Examples include a BS in Business and MS in Environmental Science or a BS in chemistry and MS in Education. (Aside: for some students with advanced placement hours and transfer credit, dual degree completion could be accomplished in four years. Other students may be able to complete two degrees in five or fewer years.) This recommendation implicitly includes the possibility of an expanded graduate presence at regional campuses and VOALC or online graduate coursework.

RECOMMENDATION: Miami will expand and promote co-majors in addition to reviewing current dual majors and dual degree opportunities. These represent a way to coordinate studies of topics across departments, programs, and divisions.

Co-majors could be a unique niche for MU, and a great supplement to the primary major of a student. Current co-majors such as environmental sciences and environmental studies have an explicit interdisciplinary emphasis to deal with topic holistically. A systematic course of study that cuts across disciplines and blends educational experience across programs, departments, cognate areas, and divisions is an exciting prospect. We believe that these types of programs could be ways to rapidly introduce new tracks of study allowing for the rapid evolution of new programs. New co-majors that come to mind might organize around big problem areas (e.g., ENERGY) or cut across divisions (e.g., HEALTH STUDIES). Note that we need to break down bureaucratic barriers and cultures that only recognize "majors." How do we credit and reward departments that participate in co-majors?

RECOMMENDATION: Provide coordinated advising of students with varying degrees of non-residential credit is critical for addressing the different sets of student admission "packages" to Miami and for facilitating flexibility in student undergraduate study.

Coordinated advising is critical for addressing needs of diverse students, including those receiving lots of AP credit to facilitate flexibility in student undergraduate study. We need to cultivate our relationship with high schools – post-secondary advising begins there (maybe even middle school?) with AP, college prep courses, ACT/SAT. As an interesting aside, all students start out undecided at Vanderbilt University and then declare a course of study after extensive first year advising. This option would not be feasible for students entering a major in departments offering a professional degree such as education, architecture or engineering. One concern is that first-year residence hall advising may not be equipped to handle the issues associated with individualizing educational opportunities for students who bring in a significant number of credits.

RECOMMENDATION: **Recognizing that divisions may differ in their perspectives regarding core knowledge in different domains, Miami should actively promote all of the feasible opportunities beyond obtaining a single baccalaureate degree within the traditional residency of four years, including dual degrees, dual majors, minors, and more.**

There needs to be a way for departments and programs to advertise options to incoming (as well as current) students in a coordinated, central location. The Undergraduate Advising Information Office might take on this responsibility in partnership with divisional advising offices and department CDAs.

Departments and programs also need to be made aware of what other departments and programs are doing in a coordinated effort. Departments and programs should be asked to submit their plans for addressing these needs of students and the best ideas and plans should be touted so that others can build on these successes elsewhere.

RECOMMENDATION: **Liberal education needs to be re-examined as a consequence of students filling requirements with non-Miami coursework. In addition, divisions, programs, and departments are encouraged to revisit their own requirements.**

The majority of students will still pursue a liberal education under the Global Miami Plan, which should persist, as its founding documents indicate, “to suggest minimum university-wide requirements” toward the development of a liberal education. The PATHWAYS committee believes that the four Global Miami Plan principles are more important than the specific course distribution. In light of multiple pathways to graduation, then, Miami needs to ensure that the aims of a liberal education are accessible through these other paths. Thus, we really need to attend to the AP/transfer issue seriously: whatever articulation requirements that courses from elsewhere meet, there is no assurance whatever that they meet the principles of the Global MP. An "articulation" mechanism (not as yet developed) for transfer credits would be required to adjudicate what is (and is not) consistent with these aims regarding courses that do not transfer automatically into Global MP credit.

This recommendation reflects the committee’s sense of a reinvigorated commitment to “nurturing a community of interest among Miami faculty and students around liberal education issues,” as recommended in the Miami Plan’s founding document. The development of such a community through all pathways involves university-wide dialogues on the broader aims of a liberal education, such as, “opportunities . . . for reflection, informed action, thoughtful decisions, personal moral commitment, ethical understanding, and civic participation” and commitment across the curriculum to the principles of the Miami Plan: critical thinking, understanding contexts, engaging other learners, reflecting and acting. We see these goals as inconsistent with a "check-off" approach to course articulation.

This dialogue should include and enable more cooperation between the Office of Liberal Education and divisions as each works toward providing students with an appropriate degree of

breadth and depth of coursework focused on the broader aims of a liberal education and Miami Plan principles. For example, LEC might look into ways to award Thematic Sequence credit for co-majors, a combined undergraduate-graduate degree program or other curricular options geared toward the integration of knowledge.

The dialogue should also involve saturation of Global MP principles/issues throughout the curriculum. LEC may wish to consider the development of “framework” along with (or in place of) “foundation” courses that would highlight ways critical thinking, understanding contexts, engaging other learners, and action and reflection at courses beyond the 100- and 200- levels. Such a step might allow for upper-level MP courses that students who have entered the school at advanced levels could take—in this way engaging with the principles although they might not need the MP Foundation requirements.

The extended dialogue on liberal education’s aims should also intersect more strongly with extracurricular life. The new Global Perspectives requirement in the Miami Plan encourages interactions between courses and multicultural student organizations. Other means through which students organizations and activities might focus on the reflecting and action principle of the Miami Plan should also be developed.

We should explore ways to ensure the capstone classes encourage integrating and culminating knowledge, along with inquiry and intellectual judgment, and social responsibility and civic engagement (identified by the AAC&U as “major themes . . . to the newly engaged and practical liberal education for the twenty-first century”). We should help students reflect on knowledge they bring with them through AP and transfer courses as well as through the work at Miami. While it might be nice to see all these goals realized in a capstone course, it is unlikely that all capstone courses would do all of these things.

RECOMMENDATION: Miami should pursue ways to recognize and support students who enter with large numbers of AP credits – for example, institute a special designation of “AP Scholars” for students who enroll in Miami with numerous AP credits; provide scholarship support; develop an AP Scholar learning community or an AP Scholars first year seminar.

A student who receives a host of AP credits is likely to be highly motivated, and to come from a high school with numerous advanced scholastic opportunities. The honors program at Miami is populated by students with lots of AP hours. We believe that this situation is an opportunity. Analogous to the recent recommendation that Miami award scholarships to high school students who have a combination of high GPA and high standardized test scores, a recognition should be crafted for students receiving lots of AP credit. These students may need academic advising that first-year residence hall advisers may not be equipped to provide. It will be important to develop special advising for these students. The Honors program already provides this to some students in this category – but not all.

RECOMMENDATION: **Miami University needs to develop and promote alternative institutional structures for delivering education, including (but not limited to) expanding study abroad opportunities, offering more summer courses, developing online courses in areas where that is feasible and appropriate, offering more service-learning, internships, professional certificates, and experiential learning opportunities, and expanding our offerings regionally, even nationally.**

Should the University consider offering more summer courses, particularly online courses (e.g., ENG 111 and ENG 112 could be offered as online summer courses)? Should summer term be beefed up to comparable complexity with fall and spring semesters? Should we be offering more online courses in general? Should we offer more courses at regional campuses, or even expand our regional accessibility through satellite campuses? What might it mean to make Miami University a "global university"? Other than offering the traditional type of study abroad programs and enrolling more international students, how might we "globalize" the University to would expand its impact -- e.g., a satellite campus in China or San Francisco?

The last four recommendations relate to specific changes to address as part of obtaining a Miami degree.

RECOMMENDATION: **Initiate a review of the minimum number of hours required for graduation with a consideration of changing from 128 hours to 120.**

There is a movement in all of the state colleges and universities that are changing from quarters to semesters to target 120 hours as a minimal graduation requirement. While we may not fully know/understand yet the reasons for this 120 hour target (historical? Divisor by 15 each term for a 3 credit hour base?), we need to be prepared to address why a degree at Miami requires an extra ½ semester study when compared to OSU or UC. We acknowledge the critical role of accreditation within the disciplines and discipline-specific "peer norms" perhaps from a perspective of faculty from their peers across other institutions. Thus, the 120 hour minimum may be exceeded by a number of majors. We need to conduct some "detective work" to consider how 120 might be achieved and include an enumeration of the pros and cons of such a change. We note that if the 128 hour requirement is reduced to 120 and is coupled with more transfer work/AP/etc., the percentage of Miami credit would be even further reduced. We want to promote a discussion of this change which will result in either a reaffirmation of the current 128 minimum, or a change accomplished by department, division, and university review of appropriate paths to achieve 120.

RECOMMENDATION: Increase residency requirement from 32 baccalaureate hours earned from Miami to 45 hours (with a corresponding percentage for associate degrees). We also should review the “terminal residency” requirement of 12 of the last 20 credit hours being earned at Miami.

Students currently only need 25% of their coursework to be from MU to receive a degree from Miami. We believe that the one year residency requirement is too low, and that a degree should reflect a greater fraction of an education being received from a particular institution. While we might prefer ½ of total hours be received at Miami, we selected a minimum of 3 semesters from Miami as a compromise position (assuming 15h / semester).

RECOMMENDATION: Allow for 15 hours of graduate coursework to count for combined bachelors-masters degree study.

Currently, only 6 credit hours can be double counted for combined undergraduate-graduate degree programs. In contrast, the College of Arts and Science has an “Arts Professional Arrangement” that allows for the first year of graduate and professional study to substitute for the senior year of study at Miami. Thus, a mechanism is in place for 32 hours of graduate credit to count for undergraduate study. As a compromise position, we suggest that 15 hours of graduate study be allowed to count for combined bachelors-masters degree study.

RECOMMENDATION: Evaluate the two-year on-campus living/ “Sophomore Residency Requirement” requirement. An alternative would be to reduce this requirement to one year.

Currently, a student is required to live on campus for two years regardless of the number of hours that they bring to campus. While we recognize that the two year on-campus requirement reflects an attempt to enhance student life, we worry that it poses a potential barrier to students and may be a disincentive for students to come to Miami.

Appendix A: Provost Charge to Pathways to Graduation Committee

Miami students now receive credits from a variety of different sources such as AP, post-secondary options (PSEO), online courses and transfer credit from taking courses at other universities. Recent legislative changes regarding AP credit as well as the expansion of online education, post-secondary options, and summer courses from community colleges have increased the number of credits that students are bringing to Miami. This committee is charged to consider implications of these changes. Possible implications include a shortening of time to degree, changes in the way students fulfill the Miami plan, and changes in the preparation of students as they advance to upper division courses. It is critical that we not merely react to these changes but develop a pro-active posture that will enable us to provide students with the best possible education while preserving university interests in important areas, notably the quality of a Miami degree and the stability of enrollment.

I therefore ask you to do the following:

1. Report succinctly on current trends regarding pre-Miami credit and their likely impact on the university.
2. Explore alternatives in Miami plan and departmental requirements that may be necessary given the credit that students are now bringing to the university.
3. Review possible educational alternatives that students with increased non-Miami credit may now be able to undertake including, but not limited to:
 - * undergraduate alternatives (e.g. study abroad, service learning, multiple majors)
 - * combined undergraduate-graduate alternatives (e.g. existing joint bachelor/master's courses)
 - * other alternatives
4. Provide recommendations for action. Include a listing of which university offices would need to be involved (e.g. registrar, advising, etc.).

I ask that you report back by March 1st.

Appendix B: Pathways to Graduation Committee

John Bailer (Chair), Distinguished Professor and Chair, Department of Statistics

Richard Campbell, Professor and Director, Journalism program, Interim Chair, Communication

Mary Cayton, Professor and Chair, Department of History

Ann Fuehrer, Associate Professor of Women's Studies

Julia Guichard, Associate Professor of Theater

Tim Kuykendoll, Technology and Data Specialist, Office of the Registrar

David Pennock, Professor of Zoology, Director of the Mallory-Wilson Center

Jim Porter, Professor of English & IMS, Director of College Composition program

Dave Sauter, University Registrar

H. Jeff Smith, Professor and Chair, Department of Decision Sci. & Management Info. Systems

Claudia Scott-Pavloff, Assistant Dean, College of Arts & Science

John Tassoni, Professor of English, Director of Liberal Education

Doug Troy, Professor and Chair, Department of Computer Science and Software Engineering

Jeff Wanko, Associate Professor of Teacher Education

* Committee met 6 times during the interval between 12/27/2009 and 2/27/2010.

Appendix C: Getting MU course credit from AP testing (excerpted from <http://www.units.muohio.edu/reg/transferecredits/apibclepscores/AP.pdf>)

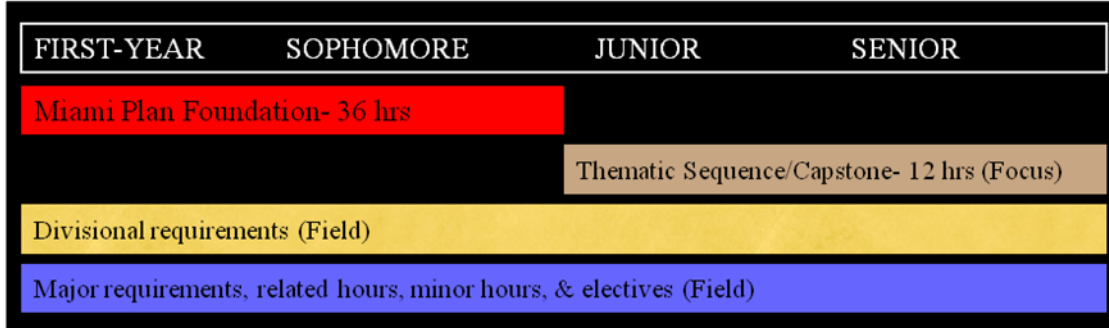
Biology	3, 4 or 5	BOT/MBI/ZOO116	Biological Concepts: Structure, Function, Cellular and Molecular Biology	4 (for score of 3: students advised to take course at college level, if biology major)
Calculus AB	3, 4 or 5	MTH 151	Calculus I	5 (for score of 3: students advised to take course at college level if going on to Calculus II)
Calculus BC	3, 4 or 5	MTH 151, 251	Calculus I, Calculus II	9
Chemistry	3	CHM 111	Chemistry in Modern Society	4

English Language *	3	ENG 111	College Composition	3 (students then take ENG 112)
	4	ENG 111	College Composition	3 (students then take ENG113)
	5	ENG 111, 112	College Composition, Composition and Literature	6
English Literature *	3	ENG 112	College Composition and Literature	3 (students then take ENG 111)
	4	ENG 112	College Composition and Literature	3 (students then take ENG 113)
	5	ENG 111, 112	College Composition, Composition and Literature	6
Environmental Science	3, 4 or 5	ZOO 121	Environmental Biology	3

Design				
U. S. History	3, 4 or 5	HST 111, 112	Survey of American History	6
World History	3, 4 or 5	HST 197, 198	World History to 1500, World History Since 1500	6

Appendix D: Course sequence typical of students' degree progression

REQUIREMENT TIMELINE:



The timeline represents the sequence of what is typical of students' degree progression

if no external credit hours (AP, PSEO, Transfer) are present. This timeline can be reduced or augmented depending on the student's person plan of study and how much credit is brought in at the matriculation point.

Briefing for the Faculty Assembly
(14 April 2010)

Recommendations from the Pathways committee report

WHAT FRAMED OUR THINKING?

Excerpts from committee charge ...

... credits brought to MU from variety of sources – AP, PSEO, transfer, online

...

... charged to consider implications of these changes ...

... not merely react to changes but develop a *pro-active posture* ...

Recognition that student experience in higher education is changing ...

WHAT WERE WE TRYING TO ACCOMPLISH?

Maintain, and possibly enhance, quality of a MU education

Promote flexibility

Identify barriers and consider strategies for reducing/removing barriers

Miami University: *where you go to receive a flexible, transformative, liberating education.* [our own "branding" exercise]

- * strong liberal arts background for preparing students to function as educated adults.
- * “transformative, liberating education” should reflect a mix of analytical (conceptual) and creative learning, a mix of studying context and constructing new understanding, and a mix of liberal and applied learning.
- * updated liberal arts education tied into work-life preparation.

Working assumptions:

- MU educational experience should enrich our students in a variety of ways. Represent what they bring to us prior to their Miami admission, as well as those non-Miami experiences during their time with us.
- Value added to a student's educational experience in a variety of ways.
- Provide a broad spectrum of interesting and exciting opportunities for our students.
- Experiences at Miami can provide greater value and a richer educational experience with us, with faculty at Miami University, rather than taking coursework and pursuing educational opportunities elsewhere.
- Challenge both of substance and perception: That is, first and foremost our product does need to provide greater educational quality and value than can be obtained elsewhere. But the quality and value also need to be evident to others: the quality and value must be identified and promoted.
- Miami needs to EMBRACE these opportunities - be PROACTIVE and PROMOTE them.

The PATHWAYS committee **emphasizes opportunities** and responding to the changing context of higher education.

Common themes underlying committee recommendations include the **promotion of flexibility** in undergraduate student studies.

Implicit in the advocacy of flexibility: **removal of institutional barriers** rather than the creation of mandates for divisions, departments, and programs.

PATHWAYS committee Recommendations / Importance? / Most difficult to implement? Commentary.

Monitoring Impact

Continue to monitor and assess student performance in courses following receipt of credit in prerequisite courses received from a variety of different sources (e.g., AP, transfer). [R1]	Critical.	Registrar and institutional research are well positioned to address this although they require time for personnel to stay on top of this. This should be done in consultation with faculty from various divisions. Note that relevant longitudinal data may be years in the making.
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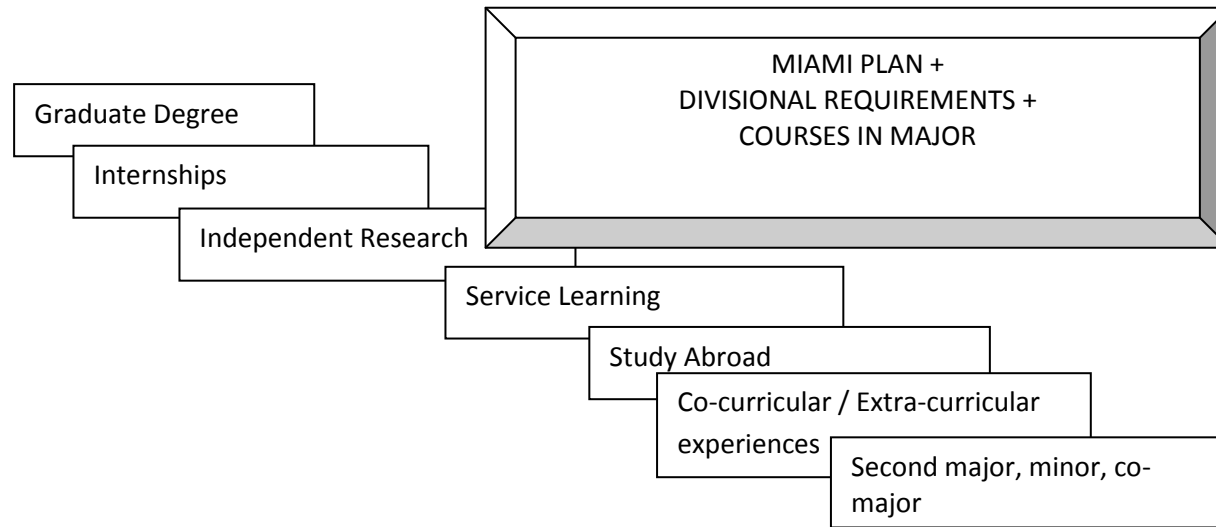
Table 2.1: Number of Miami Plan course requirements satisfied with AP credit (Fall of Years 2007-2010)

Attr. Code	Attr. Desc	2007	2008	2009	2010
I	FND - English	440	397	407	735
IIA	FND - Fine Arts	52	54	34	41
IIB	FND - Humanities	767	682	700	1,185
IIC	FND - Social Science	399	476	471	815
IIIA	FND - US Cultures	624	514	544	766
IIIB	FND - World Cultures	118	156	171	294
IVA	FND - Biological Science	199	178	157	218
IVB	FND - Physical Science	237	216	238	408
V	FND - MTH, Formal Reason, Tech	543	423	453	625
Total		3,379	3,096	3,175	5,087

Importance of Coordinated Advising

<p>Miami students on all campuses should be encouraged, and provided sufficient advising, to explore a variety of opportunities during their time on campus. These include: studying abroad; participating in service-learning opportunities; enrolling in dual programs; getting dual majors; getting second / double majors or second degrees or co-majors; pursuing internship experiences; working on, or even finishing, combined undergraduate-graduate programs. [R2]</p>	<p>Critical.</p>	<p>Many options easy to implement; however, others (internships) may require a ramping up of effort. Second degrees across divisions may be burdened by needing to meet requirements of both divisions. Graduate programs should reflect on what could be done to facilitate transition to graduate study for Miami undergraduates. Partners: Advising, CPPA, Academic Deans, Registrar.</p>
<p>Provide coordinated advising of students with varying degrees of non-residential credit is critical for addressing the different sets of student admission “packages” to Miami and for facilitating flexibility in student undergraduate study. The advising community might consider creating a dual advising assignment for AP Scholars, e.g., first year adviser and a divisional or faculty adviser. These students, although technically not freshmen, still will benefit from the developmental perspective of the first year advising model, but also will need the academic guidance with the depth of the division, department, or program. [R5]</p>	<p>Critical.</p>	<p>Without advising, students may not be aware of the richness of opportunities. What is the point of entry of students to Miami? When students arrive, what do they have? What are they missing?</p>
<p>Recognize and support students who enter with large numbers of AP credits- e.g., institute a special designation of “AP Scholars” for students who enroll in Miami with numerous AP credits; provide scholarship support; develop an AP Scholar learning community or an AP Scholars first year seminar. It may also be useful to make special advising arrangements for these students. First-year residence hall advising may not be the best way for them to discover the range of academic opportunities available to them. [R8]</p>	<p>Important.</p>	<p>These students usually come from academically strong high schools (need to have the ability to provide AP classes) and these students are motivated to take these classes. Future of AP in high schools?</p>

What is the “Miami experience” for our students?



- * How do we communicate the rich set of options available to students?
- * More than “if we offer it, they will come” [with apologies to *Field of Dreams*]
- * Not simply advising – recruiting, yield, retention tied to this experience

Making the University more Flexible		
<u>Actively promote</u> all of the feasible <u>opportunities beyond obtaining a single baccalaureate degree</u> within the traditional residency of four years, including dual degrees, dual majors, minors, and more. [R6]	Critical.	Easy to promote options but will require coordination among different offices including admissions, advising (at all levels), and the registrar. Caveat: divisions may differ in their perspectives regarding core knowledge in different domains.
<u>Develop and promote alternative institutional structures for delivering education</u> , including (but not limited to) expanding study abroad opportunities, offering more summer courses, developing online courses in areas where that is feasible and appropriate, offering more service-learning, internships, professional certificates, and experiential learning opportunities, and expanding our offerings regionally, even nationally. [R9]	Critical.	If we don't provide such alternatives, then our students will find them someplace else.
Initiate a <u>review of the minimum number of hours required for graduation</u> with a consideration of changing from 128 hours to 120 (recognizing that accreditation and degree requirements may lead to more than 120 hours for some majors). [R10]	Critical.	We need to be aware of what other universities are requiring. The implication of such a change on majors with lots of requirements must be carefully evaluated. The 120 could be the "advertised minimum" although some (i.e., the SFA accreditation issue) require more. So when we explore the 120 of other places we should explore IF 120 is "all" or most/some/etc.
<u>Expand and promote co-majors</u> in addition to reviewing current dual majors and dual degree opportunities. These represent a way to coordinate studies of topics across departments and divisions. [R3]	Important.	Relatively easy to implement since co-major model exists. Incentives to develop? Review the ideal co-major structure – may be different than the current implementation.
<u>Expand the number of graduate degree programs</u> offered, especially Master's degrees. [R4]	Important.	Barriers to introducing new graduate programs, even PSMs, at OBOR? Could existing degrees be modified to accommodate such expansion? Examples already exist – 5 yr. BA/MA Accounting.
Allow for <u>15 hours of graduate coursework to count for combined bachelors-masters degree</u> study. [R13]	Important.	Coursework taken at the 500 or 600 level will have more stringent requirements than 400 level counterparts. We believe this is a relatively easy change to make.

Observations based on recent Quarter-Semester workshop (from Dave Sauter - 10 Apr. 10)

1. OU, OSU, WSU and Shawnee are moving to a 14 week classes/1 week finals (a 15 week term) instead of the more traditional 15+1=16.
 - a. They will end earlier in December and then late April.
 - b. Classes are lengthened – 50 minutes becomes 55, etc.
 - c. Sinclair (WSU feeder) and Columbus State (OSU feeder) and maintaining the 15+1=16, however.

2. All but two are using 120 credit hours as a minimum (OSU 121, Shawnee 124) graduation requirement, with all using a 60 hour associate degree minimum.
 - a. In many cases >120 requires Provost approval
 - b. Certain majors (details not yet finalized) will require more credit hours, typically architecture/engineering (informal discussions suggest that they would be <130 h).
 - c. In some cases the current quarter hour graduation requirement, if multiplied by the 2/3 to arrive at semester equivalent, would result in greater than 120 hours (informal discussions suggest that the expectation was to reduce to 120/close to 120).

* A summary report is being developed.

Curricular and Residency Modifications		
<p><u>Liberal education</u> needs to be <u>re-examined</u> as a consequence of students filling requirements with non-Miami coursework. In addition, divisions, departments, and programs are encouraged to revisit their divisional requirements. [R7]</p>	Critical.	Liberal education requirements and divisional requirements will continue to evolve. The changing context of higher ed is pushing some of these changes. What does a 70% match in a course taken elsewhere really mean for a student taking other courses at Miami?
<p><u>Increase residency requirement</u> from 32 baccalaureate hours earned from Miami to 45 hours (with a corresponding percentage for associate degrees). We also should review the “terminal residency” requirement of 12 of the last 20 credit hours being earned at Miami. [R11]</p>	Critical.	A Miami degree should reflect a significant experience earning course credit from Miami. The current requirement is too low. This should be relatively easy to implement. Need to decide when this would apply and other issues such as which class would be impacted by this?
<p><u>Evaluate</u> the impact of the <u>two-year on-campus living/</u> “Sophomore Residency Requirement” <u>requirement</u>. [R14]</p>	Important.	Could this requirement discourage students with lots of AP credit from attending MU? Work with Student Affairs to analyze the effect of sophomore / second year experiences.