

Division of Academic Affairs



Academic Update

Presented to the Board of Trustees
October 14, 2005

OVERVIEW

President Eisler has focused the Ferris community on the development of a vision for its future. This vision is anchored by three principles, or pillars: the creation of a learning centered University, working together, and becoming an engaged campus. The Division of Academic Affairs embraces these overarching principles and relies on these fundamental guides as the Division strives to establish its own strategic focus.

Much work has been done toward that end during 2004-05 and the Academic Affairs 2005-06 Planning document outlines six goals that the Division will focus on during this academic year:

1. Enhance the academic environment;
2. Insure a relevant and current curriculum;
3. Institutionalize academic management processes that ensure an excellent, cost-effective teaching and learning environment;
4. Review processes that impact faculty development;
5. Review processes that impact student outcomes; and
6. Review processes that impact enrollment growth, retention, and external partnerships.

Decision making in Academic Affairs is driven by data collection and analysis through a participatory process. While work is currently underway on all six goals, this document will report on four current initiatives on which the Division has already made significant progress:

- Review of small class size;
- Review of the hours required for graduation by program;
- Assessment of Student Learning Outcomes and Program Viability
- Enhancing the academic environment through classroom renovation.

We are pleased to present this report of our activities in several areas that impact our students' success and their ability to maximize their potential.

REVIEW OF SMALL CLASS SIZE

Under Enrolled Classes

Academic Affairs has set a goal to institutionalize academic management processes that ensure an excellent, cost-effective teaching and learning environment. Toward that end, the Division continues to review processes that impact administrative effectiveness and has launched an initiative to review every course being offered to determine the relevance and validity of the class size and offering. While it is not the intention of this review to suggest we increase the capacity of our course offerings, it is the intention to better manage and utilize the offering of current and future courses.

Through the curriculum approval process, maximum class sizes are established for each class offering. The criteria used to establish the maximum number of students in a class ranges from pedagogical rationale to physical limitations. Factors include:

- Laboratory safety
- Regulatory restrictions from state and federal agencies
- Accreditation restrictions
- Limitations of equipment or space within laboratories
- Seating capacity of classrooms

The average class size is 26.9 students per class. Each semester Deans are directed to justify any class with fewer than ten students and any classes with student enrollments of one-half the maximum capacity. This review provides longitudinal data for curricular review. We also account for the number of students graduating from the programs each year.

We have collected seven semesters of enrollment and registration records and analyzed these data by college and program to determine trends in low enrollment across colleges. Each college has been examined according to factors germane to that college such as instructional methods and licensure requirements, etc. The Deans and Department Heads continue to monitor small class sizes and take actions to reduce the number of under-enrolled offerings.

The colleges have already implemented some strategies to reduce the number of under-enrolled classes. Some success has been realized by combining lecture sections where there are small laboratory size restrictions. Analysis of enrollment patterns has allowed some programs to offer courses less often without interfering with student programmatic progress. Employing these techniques we have already witnessed a dramatic reduction in the percent of under-enrolled classes. (Fall 2004: 4.26% reduced to Fall 2005: 2.34 %). We will continue to use this analysis as our metric to measure and improve our efficiency.

REVIEW OF HOURS REQUIRED FOR GRADUATION BY PROGRAM

The Division of Academic Affairs conducted an analysis of the average length of time it takes Ferris State University students to earn their degrees and examined each degree program to determine the credit hours required to earn that degree.

During three consecutive academic years (2001-2002 – 2003-2004) Ferris State University confirmed 7,762 degrees. Of BS degrees confirmed, 73.3% were granted with over 128 earned credits, indicating that the majority of students must attend more than four years to complete a bachelor's degree. Of even greater concern is that 37% of those graduating earned more than 165 earned credits.

The goal of most universities nationwide is to graduate students with 120 credits, recognizing the special nature of specific programming. The Vice President for Academic Affairs challenged the University community and the specific programs to reduce the credits within programs at Ferris State to a maximum of 128 credits. This challenge will be greater for some programs than others as some programs were found to require as many as 143 credits. Thirty-seven of the 128 BS degrees offered by Ferris State require more than 128 credits to graduate.

Each program is urged to examine its curriculum and find ways to reduce the credits required to graduate to 128 without jeopardizing the quality of learning outcomes. To date several programs have already met the challenge. The entire College of Arts and Sciences has reduced program credit hours to 120. Several other programs have quite easily met the 128 credit hour challenge.

We have also asked the programs to begin looking for ways to make transferring from one program to another less punitive for students. Ease of transfer between programs is a critical component of student retention as well as hours toward graduation.

The data from effective assessment allow us to make decisions that can improve our programs, enhance our curricula, and develop our classes so that our graduates will continue to be known for their excellent preparation. This exercise in effective management of academic processes is one more facet of the multi-faceted, data-driven approach to assessment within Academic Affairs.

ASSESSMENT

Assessment is a fundamental part of meeting the educational challenge of creating a successful learning environment. Effective assessment lets us know what our students are learning: whether students are learning what we think is important, whether our programs are effectively achieving their goals, and whether our curricula enable students to meet the outcomes expected of them in a reasonable time. The data from effective assessment allow us to make decisions that can improve our programs, enhance our curricula, and develop our classes so that our graduates will continue to be known for their excellent preparation.

In the past academic year we have initiated, encouraged and supported a renewed emphasis in assessment in numerous ways:

- Assigned Associate Vice President oversight responsibility for University assessment
- Appointed faculty member coordination responsibility for campus-wide assessment
- Supported development of assessment database which will provide access to all assessments being carried out at the University with the ability to sort by assessment purpose, assessment type, college and program
- Supported creation of University-wide Assessment Committee
- Funded professional development in area of assessment
- Revised Administrative Program Assessment instrument to reflect emphasis on learning outcomes
- Restructured accreditation review process to include thorough review by VPAA prior to self study submission as well as active participation in site visits.

Ongoing assessment efforts at FSU include Academic Program Review (APR); Administrative Program Review; General Education Assessment; Accreditation Self Studies; and numerous programmatic assessments tied to capstone course assessment. In addition to these annual assessments, last semester Academic Affairs administered two nationally normed assessment instruments, the Academic Profiles and the National Student Survey of Engagement (NSSE). The NSSE assessment was conducted in coordination with the Division of Student Affairs.

Academic Profiles

The Academic Profile test was developed by the Educational Testing Service (ETS) for outcomes assessment of general education in colleges and universities. The test questions are concerned with issues, themes and ideas from the humanities, social sciences, natural sciences and mathematics. The test also measures “a student’s ability to read carefully, to make judgments about the clarity, correctness, or organization of the materials as pieces of writing, and to think critically about the issues and arguments presented.”

Ferris State University chose to use the Academic Profile Test as one assessment of our general education curriculum outcomes. Using Academic Profile provides a measure which can be compared with those of comparable colleges and universities nationally.

Findings: For the first time since the Academic Profiles was administered in 1996, Ferris Graduating Seniors closely approximated the total score of comparable comprehensive institutions and exceeded the sub-scores for seniors in mathematics and natural sciences. Students show consistent improvement in total score and sub-scores for all general education outcomes across all four years.

Ferris' Academic Profile Comparative Group - Academic Profile data are reported for five particular groups of institutions:

- Research/Doctorate Universities
- Comprehensive Colleges and Universities
- Liberal Arts Colleges
- Associate-of-Arts Colleges
- Specialized Institutions

Ferris is included in the Comprehensive Colleges and Universities category, even though the University offers a considerable number of associate degree programs and two professional medical degrees. The Academic Profile Comprehensive Colleges and Universities group fits within the Carnegie Classification category:

“Master’s (Comprehensive) Colleges and Universities....The institutions offer baccalaureate programs and, in many cases, graduate education through the master’s degree. More than half of their baccalaureate degrees are offered in two or more occupational or professional areas, such as engineering or business administration.”

The Academic Profile Comparative Data Guide includes test results for 34,563 upperclassmen and 26,511 freshmen at Comprehensive Colleges and Universities.

It is important to note that while entering freshmen at Ferris score significantly lower than entering freshmen at comparable institutions, our students still make greater gains than average, a measure of the effectiveness of our general education program. (see **Appendix A: Academic Profiles Data**)

National Survey of Student Engagement (NSSE)

Academic Affairs, in conjunction with Student Affairs, conducted an assessment using the NSSE. The NSSE measures the level of academic challenge, student interactions with faculty, collaborative learning, enriching educational experiences, and the level of support of the campus environment. The student behaviors and institutional features measured are some of the more powerful contributors to learning and personal development, thus providing an institution with a picture of the important aspects of the student experience.

Findings: In Spring 2005, 529 colleges and universities participated in the NSSE evaluation.

The data is reported in several ways. First, every participating institution will receive an institutional report including means and frequency distributions on all questions, comparative data for similar colleges, as well as a NSSE data file of students' responses.

The NSSE reports on the complete learning environment. Academic Affairs is initially focusing attention on the findings that reflect classroom and curricular issues. Overall results show that Ferris students score lower than the national means. There were some items for which Ferris students score higher, though the difference between Ferris students and the national mean is minimal. Ferris students write more drafts of assignments. First year students write longer assignments than the national norm. Both first year and senior students work collaboratively in class more often than the national mean, and both first year and senior students report having good relationships with faculty and administrators.

The findings indicate that our students go to class without reading or completing assignments more often than the national mean. Senior students write shorter papers than the national mean. And both first year and senior students report memorizing facts more often than analyzing and synthesizing. Of most concern, however, is that both first year and senior year students report that if given the opportunity to start all over again, they would not choose Ferris State.

The NSSE will be used as a biannual assessment tool and the results will help in directing our academic planning and campus assessment practices. These scores, particularly when seen in relation to the Academic Profile results which have been charted over a decade, illustrate the transitional period that Ferris is experiencing. Academic Profiles has revealed that Ferris students historically scored below comparable institutions. Even though our students made significant progress during their course of study, seniors still scored below those at comparable institutions. However, this year, that gap began to close and in two areas our seniors were equal or better than those at comparable institutions.

Initial speculation suggests that as admission standards rise and the ability levels of students increase, the academic rigor will also need to rise accordingly. The expectations from our students in terms of assigned homework, length of written assignments, critical thinking, will, no doubt, increase as the faculty adjust to the rise in ability level of the new Ferris student. Perhaps increasing the academic challenge will affect students' perception of the education they receive and therefore encourage them to want to start all over again at Ferris. (see **Appendix B: NSSE Data on Academic Items** and **Appendix C: NSSE 2005 Ferris State University: Interpreting the Report**)

Academic Program Review (APR)

Academic program review at Ferris State functions effectively through the collaboration of faculty and administration. Academic program review is one of several means by which academic excellence is measured at Ferris. Broadly defined, academic program review involves the study of all aspects of a degree program—students, curriculum, administration, facilities, alumni, employers, and labor market. At Ferris, this study, which takes up to a year to prepare, is done on a cyclical basis (once in six years) and is required of all degree programs.

As with any assessment process, the response to findings is equally, if not more, important than the collection of the data itself. Each year the APR Council makes recommendations to the Vice President for Academic Affairs (VPAA) in regard to the programs assessed. The Vice President has responded to each of the recommendations made by the panel. (see **Appendix D: VPAA Response to 2004 APRC Recommendations**)

Administrative Program Review

Administrative Program Review is an annual assessment completed by program administrators. The purpose of Administrative Program Review is to facilitate a process led by the deans and department heads/chairs to assess and evaluate programs under their supervision; to facilitate long term planning and recommendations to the VPAA and to collect and analyze information that will be useful in the University's accreditation efforts; Academic Program Review deliberation; and assessment. As noted previously, this review process was revised by the VPAA in Winter 2005 in order to reflect an emphasis on learning outcomes.

Lessons Learned:

- The use of multiple measures in assessment is critical. Academic Profiles has provided a valuable perspective on the NSSE data, suggesting areas for additional study and response.
- Long-term assessment with a single instrument, as in the case of the Academic Profiles, provides useful and necessary benchmarking and longitudinal view of curricular effectiveness.
- Initial data from the NSSE suggests that focus on the entire learning environment is critical for success
- Closing the assessment loop requires analysis of data and action by those responsible. The responsiveness by the VPAA to Academic Program Review Council recommendations is essential for program vitality.
- Attentiveness to process is key to raising expectations and increasing focus on quality. This has already proven true with the VPAA's attentiveness to administrative program review, academic program review and accreditation reviews.

ENHANCING THE ACADEMIC ENVIRONMENT THROUGH CLASSROOM RENOVATION

Learning spaces are a key factor impacting learning outcomes and student success. Last year, as part of the University planning process, President Eisler convened six Task Forces to address key issues on campus. The Task Force on Physical Teaching Spaces made a number of recommendations regarding ways to improve learning spaces on campus. As a result of the work of the Task Force, the President composed a cross-divisional team (Academic Affairs and Physical Plant) and charged them with identifying classrooms on campus for renovation and developing a plan for revitalizing all classrooms within five years. The President allocated \$800,000 for renovations this year.

The team developed a comprehensive process to identify a priority list. The group concluded that there are twenty class rooms requiring immediate attention and should be renovated as Phase I. The classrooms were divided into two categories. Category I was comprised of the most frequently used rooms on campus. These ten rooms did not require extensive renovation but were lacking in current educational technology and lacked aesthetic features conducive to learning. Category 2 are rooms that require more extensive renovation in order to bring them up to standard. Some of the Category 2 rooms were classrooms for which instruction had not been the intent of the original design; others were simply outdated.

Category 1

Background: The first round of renovations is considered a pilot project involving the most frequently used rooms on campus, a total of ten classrooms. (Automotive 105 and 108; Science 130; Starr 132, 130, 122, 129, 223, 207; Business 224). These ten rooms will serve as templates for future renovations.

The goal of the renovation project was to create enhanced learning spaces that are more contemporary in design and reflect the shift from teacher-centered to learner-centered pedagogy. The renovated learning spaces provide furnishings that are easily moved so that classes can reconfigure themselves according to the needs of the particular lesson and technology enhancements to allow for web/computer enhanced instruction (computer with internet capability, DVD, VCR, ELMO or SMART symposium). Finishes were chosen to eliminate the sterile, institutional atmosphere of the original classrooms and replace with more comfortable, relaxed, and colorful learning environments.

A survey will be conducted to obtain feedback from students and faculty regarding the room finishes, technology, and furnishings in order to determine selections for future renovations.

Cost: The average cost per Category 1 classroom renovation is **\$33,000**.

Category 2

Background: The rooms in this category involve more extensive “renovation” than the paint and finish of Category 1 rooms. The rooms identified as Category 2 were seen as truly

“substandard” because of major structural changes required to make them acceptable. Of the 12 rooms originally identified for this project, 3 have been completed to date: conversion of the boiler room to accommodate the Automotive multi-purpose lab; Southwest Commons (SWC) converted to meet the needs of the Police Academy; and Taggart Hall lounge converted to meet the needs of Visual Design students’ lab.

Each of these projects involved special renovations specific to the needs of the program. Criminal Justice has recently revised its curriculum to become a national model of problem-based learning. The spaces renovated in SWC are designed to accommodate this unique curriculum that promises to attract national attention. The two rooms on the first floor are conventional classrooms renovated according to the standards of the Category 1 rooms, including technology enhancements. These two rooms also include computer breakout areas and an area for practicing finger printing. The second floor rooms are designed for the virtual shooting range and for what is called a “dirty room,” a room that can be used for simulations for various sorts.

The lower lounge area of Taggart Hall has been renovated to provide 24-hour lab space for Visual Design students who are part of a living/learning community. A cohort of Visual Design students live in Taggart residence hall, have access to a computer lab on the main floor, and now have design space on the lower level with drawing tables, cutting mats, spray hood, and group work space for collaboration and display of student projects.

The third Category 2 space is for the Automotive program. This program has grown so significantly in the past three years that they have outgrown their auto service floor lab. As a temporary measure, the boiler room has been converted into a lab space for the program.

Lessons Learned:

- Cross-divisional team approach has proven to be highly effective. All participants came away from the project with increased understanding for utilization of facilities and appreciation and respect for all stakeholders’ interests.
- Many factors involved in setting reasonable time schedules for completion of a project of this nature.
- No single vendor was secured for this pilot. A variety of furnishings are being used in order to allow for faculty and student input and participation in the final selection process of standard furnishing for FSU classrooms.

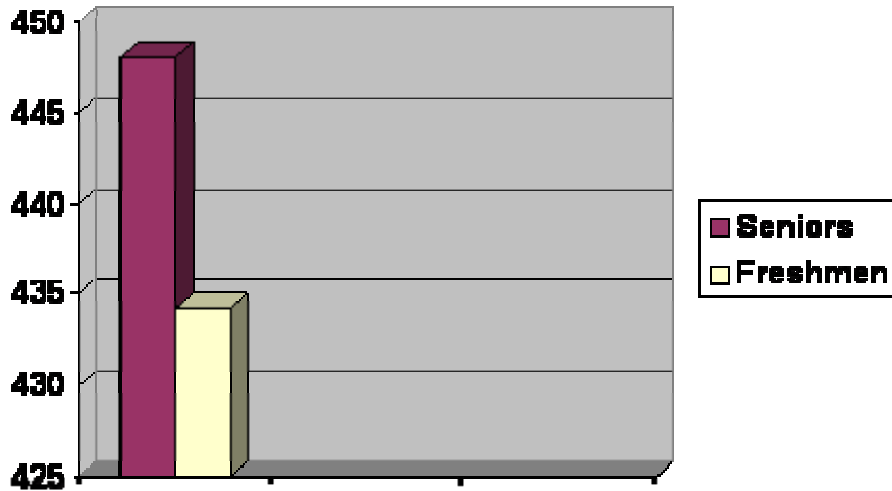
Please see **Appendix E** for *before* and *after* renovation pictures.

APPENDICES

Appendix A: Academic Profiles Data

The following illustrates the gain in mean scores between freshmen and seniors taking the exam.

Overall Mean Scores, 2005



Overall Results by outcome area:

FRESHMEN 2005 (243 students)	POSSIBLE RANGE	MEAN SCORE	25 TH %	50 TH %	75 TH %
TOTAL SCORE	400 TO 500	434.21	423	433	444
CRITICAL THINKING READING	100 TO 130	107.93	104	108	111
WRITING	100 TO 130	115.2	111	114	120
MATHEMATICS	100 TO 130	111.91	109	112	115
HUMANITIES	100 TO 130	112.38	109	113	115
SOCIAL SCIENCES	100 TO 130	111.75	107	110	114
NATURAL SCIENCES	100 TO 130	110.51	107	110	115
	100 TO 130	112.6	109	113	116

SENIORS 2005 (132 students)	POSSIBLE RANGE	MEAN SCORE	25TH %	50TH %	75TH %
TOTAL SCORE	400 TO 500	448.10	433	446	462
CRITICAL THINKING READING	100 TO 130	111.76	107	111	115
WRITING	100 TO 130	114.41	111	114	118
MATHEMATICS	100 TO 130	115.85	110	115	122
HUMANITIES	100 TO 130	114.88	110	114	122
SOCIAL SCIENCES	100 TO 130	114.35	110	115	121
NATURAL SCIENCES	100 TO 130	116.75	111	118	122

Ferris Freshman and Seniors compared to national sample of comprehensive Colleges and Universities.

	Ferris F	National F	Ferris S	National S
Total Score	434.21	439.48	448.10	448.70
Critical Thinking	107.93	109.43	111.76	112.16
Reading	115.20	116.86	119.64	119.88
Writing	111.91	113.49	114.41	115.42
Mathematics	112.38	112.86	115.85	114.60
Humanities	111.75	113.32	114.88	115.78
Social Sciences	110.51	111.94	114.35	114.60
Natural Sciences	112.60	113.69	116.17	116.04

This is extremely significant data. For the first time, Ferris graduating seniors have a total score nearly equivalent to comparable institutions, and even out score the national scores in mathematics and natural sciences. This is despite the fact that entering students score lower than the national norm. Ferris students make greater gains than the national norm.

Appendix B: NSSE Data on Academic Items

Our students *scored lower than the national norm* in most areas. There were several items for which the FSU students *scored higher* than the national norm. The table below highlights those academically-related items and reports the national and FSU scores for comparison.

Item	National	FSU
Our first year students prepare two or more drafts of a paper or assignment before turning it in	2.65	2.71
Our seniors prepare two or more drafts of a paper or assignment before turning it in	2.51	2.64
Worked with other students collaboratively in class (first year students)	2.4	2.56
Worked with other students collaboratively in class (seniors)	2.52	2.82
Our seniors used an electronic medium to discuss or complete an assignment	2.81	2.83
Our first year students wrote papers or reports of 20 pages or more	1.25	1.3
First year students report having good quality relationships with instructors and administrators	4.76	4.97
Seniors report having good quality relationships with instructors and administrators	4.63	5.28

Not all instances of higher scores than the national norm are positive reflections of our student engagement. In the table below are listed items that FSU students scored higher on than the national norm are of concern:

Item	National	FSU
Our first year students go to class without reading or completing assignments more often than the national norm	2.03	2.06
Our seniors students go to class without reading or completing assignments more often than the national norm	2.08	2.16
Our seniors write more papers fewer than 5 pages than the national norm	3.13	3.25
First year students scored higher than the national norm on the number of problem sets that take them less than an hour to complete.	2.55	2.56
Our seniors scored higher than the national norm on the number of problem sets that take them less than an hour to complete	2.33	2.72
First year students reported “memorizing facts” more than analyzing and synthesizing than the national norm	2.85	3.0
Seniors reported “memorizing facts” more than analyzing and synthesizing than the national norm	2.7	3.08
Despite the fact that students at both first year and senior level report good relationships with faculty and staff, they scored lower than other institutions when asked to evaluate the quality of the educational experience at Ferris and if they would go to the Ferris again if they were to start all over. (first year)	2.88	3.09
Despite the fact that students at both first year and senior level report good relationships with faculty and staff, they scored lower than other institutions when 3.19asked to evaluate the quality of the educational experience at Ferris and if they would go to the Ferris again if they were to start all over (seniors)	3.19	2.88

Appendix D: VPAA Response to 200405 APRC Recommendations

Program	Recommendations to VPAA
Doctor of Optometry	Optimize current facilities as much as possible while waiting for new bldg. explore ways of making MCO more attractive to out of state students In Progress
Television and Digital Media Production; recommend program be enhanced	evaluate request for additional secretarial support VPAA provided 12 mos. Temporary administrative employee for program
Visual Design and Web Media AAS/BS	find way to properly ventilate space— addressed through Taggart Living/Learning project
Heavy Equipment AAS and BS; continue with monitoring	program faculty should complete a real self study and submit it by March 15, 2005
Management BS; continue with redirection; significant problems exist within the curriculum	Submit revised plan to VPAA by Oct 15, 2005
Manufacturing and Tool Tech AAS	hire tenure track faculty to replace vacant position New position approved 2005

APPENDIX E – Classroom Renovation Pictures