

Prince Mohammad Bin Fahd University
(Under Registration)

**DIVISION OF RESEARCH
✦ DEVELOPMENT AND CONTINUING ✦
EDUCATION**

Final Report

22 February 2005

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 **PREFACE**

The *Division of Research Development and Continuing Education Final Report* is submitted in partial fulfillment of Item IV.P. of the Contract between the Texas International Education Consortium (TIEC) and the Prince Mohammad Bin Fahd University (PMU) Founding Committee to facilitate the establishment of the PMU. This report was prepared by the TIEC Project Management Team and a team of experts from several TIEC-affiliated universities who are experienced in developing and operating research activities and continuing education programs.

The *Division of Research Development and Continuing Education* report is both a project management document and an operational document. As a management document, it describes a key division of PMU that will extend the influence and recognition of the university into the community by providing direct services to businesses, industries, and individuals. As an operational document, it is intended to guide the PMU executive leadership as they select, organize, and direct activities of the university that will meet important educational needs of key constituents.

The Division is a distinct organizational unit of the university in order to assemble the resources necessary to meet client needs. However, it is also dependent directly on the knowledge, skills, abilities, and commitment of faculty and staff of the university to serve the needs of the community. The Division is expected to be self-sustaining, hence its success will depend on the effectiveness of leaders in both the Division and the university to organize the resources to meet client needs.

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President

Texas International Education Consortium

22 February 2005

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**DIVISION OF RESEARCH DEVELOPMENT AND
CONTINUING EDUCATION FINAL REPORT**

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I. EXECUTIVE SUMMARY

The Division of Research Development and Continuing Education (DRDCE) of Prince Mohammad Bin Fahd University (PMU) will be an innovator in higher education and a leader in achieving the university's goal of breaking down the barriers between academics and society. All divisional programs will be driven by careful needs assessment analyzing strengths, weaknesses, opportunities, and threats (SWOT) in the region and throughout the Kingdom of Saudi Arabia (KSA) as identified by internal and external community stakeholders.

Research at the PMU should be seen as having a strong inter-relationship with the region's business and industrial sectors and with the region's economic development interests. Research projects conducted by its faculty and staff will be strongly focused and driven by those missions. Research will be composed of a department of Scientific Research and Applied Research.

Scientific Research will encompass those areas of research of particular interest to the faculty within the various colleges of the university; it will be intended to help in the development and enhancement of their educational and training missions. Applied Research will include, at least initially, three Centers of Research: the Community Design Resource Center, the Information Technology Resource Center and a General Research Center, each focusing in their areas of expertise.

Continuing Education (CE) will include three operational units: English Language Center (ELI), e-Learning Center, and Continuing Education Center. Each of these departments will focus on meeting the needs of the community.

The English Language Institute (ELI) will provide the lead development model in continuing education. It also provides a "quick start" program that can be implemented if there is interest in starting divisional programs earlier than the fourth or fifth years of the university. ELI programs will:

- 1) provide a variety of courses to meet the specialized and actual requirements and practices of the surrounding businesses;
- 2) meet the professional, academic, and personal needs of non-traditional students for English communication skills;
- 3) meet the needs of public schools for the training and certification of English language teachers.

Innovation is key in the success of self-sustaining CE unit activities. As a result, the contemporary trend in universities to partner with external entities to deliver professional education programs will be followed in order to establish a "turn-key" e-Learning Center. E-Learning courses will focus on Information Technology (IT) and business management.

All other programs will initially fall under the jurisdiction of a Continuing Education Center. This center will deliver programs consistent with the expertise of university faculty and the needs of the community. In addition, an alternative, contract-based course delivery methodology is provided that will enable PMU to partner with third party entities in order to offer local classes in much need health care areas that are not available through university disciplines.

II. DIVISION OVERVIEW

A. VISION, MISSION, AND GOALS

1. Vision

To be an innovative international leader in providing research and higher education opportunities that break the barrier between academics and society.

2. Mission

The Division of Research Development and Continuing Education (DRDCE) will develop educational programs and conduct research based on the assessment of student and societal needs. The division will:

- Advance intelligence and develop knowledge through research and special learning programs.
- Link research and learning to the needs of the community.
- Provide community service through educational programs
- Form close partnerships with internal and external constituents to advance and market all university programs.

3. Research and Education Goals and Objectives

The DRDCE will be an institutional leader in the development and delivery of flexible programs and services. It will focus on building public and institutional awareness and support for research and continuing education programs. A strong external executive advisory committee will oversee the committee structure for the division and foster internal/external partnerships building opportunities in research and continuing education programs. Programs will be developed that are consistent with the missions and strategic plans of the individual colleges and departments within the university.

a. Research

- Assist academic colleges with providing capstone experiences for students.
- Coordinate and support campus scientific research.
- Coordinate development of partnerships with business and industry for the operation of the Community Design Resource Center and Community Technology Resource Center.
- Develop on-campus consultation and marketing services to increase partnership with campus units and external organizations.
- Foster technology transfer for regional and national economic and business development.
- Provide applied real-life hands-on experiences through internships in business and industry for students in cooperation with academic colleges.
- Provide technical services and support with industry and manufacturing businesses.

b. Continuing Education

- Develop a coordinated marketing program that utilizes market research to determine population needs.
- Expand development and support for programs for nontraditional students.
- Promote the use of e-learning and development of e-learning programs
- Provide marketing opportunities for learning programs
- Provide training in professional communications in English for a variety of career specialties
- Provide credit and non-credit lifelong-learning opportunities and continuing education programs for professional and personal development.
- Develop and maintain a client mail list to increase response rates

III. GENERAL OPERATIONS

A. INTRODUCTION

The DRDCE needs to be a “community driven” organization that shares control of decisions and resources with community groups based on their needs. In such an organization, businesses and community organizations are treated as assets and partners in the development process in order to build on their institutions and resources. Community-driven organizations facilitate community access to information and promote an enabling environment through their policies and community participation in operational committees.

Because of the unique external nature of research development and continuing education, an important part of the division’s organization will be its advisory committees and its continual assessment of the needs of the community. The division also should be organized to be responsive to rapidly changing societal needs and to develop flexible delivery methodologies to deliver programs. Meeting the needs of business and industry and the expanding population of the KSA will require programs that offer alternative classes in terms of time and space. An expanding market for learning programs also exists throughout the Kingdom, and the flexibility of programming should allow delivery anywhere in the Kingdom and even internationally.

1. Executive Advisory Committee

The Executive Advisory Committee will have the oversight and leadership responsibilities for all activities of the DRDCE. It will help guide the development of internal and external university partnerships. This committee will also support the development of additional advisory committees and other outreach vehicles. This committee initially will be appointed by the PMU Founding Committee. Once the committee is appointed, its members will elect their chair. Committee membership should be open to interested parties in the business community, but the initial committee should have 10 appointed members. Additional committee members can be added later by the committee itself.

This committee should meet quarterly for the first two years of the division’s creation. Because its nature is advisory to university executives, the committee may eventually determine that fewer meetings will be necessary after the initial start up of the division. The areas that this committee should review on a periodic basis should include:

- Vision and mission of the division
- Focus of division activities
- Economic development needs

- Future trends and changes seen in KSA
- Advisory Committees needed for the division
- Overall effectiveness of division committees
- Needs assessment methodologies
- Other outreach vehicles for the committee

2. **Operational Advisory Committees**

The Operational Advisory Committees will be actively involved in guiding the activities in each unit of the division. Committee members may be nominated by supervisors and faculty in each operational unit, but the actual committee appointments will initially be made by the Director of the DRDCE. Because important target populations of students for continuing education and projects for research exist throughout the KSA, it will be important to include representation on committees from outside the Eastern Province. The Operational Advisory Committees should meet frequently and be involved in the specific operations of the individual units of the division.

General oversight of each of these committees rests with the Executive Advisory Committee, but the ongoing functions of these committees will rest with the director of the division and the unit supervisors. At start-up of the division, the Operational Advisory Committees should be:

- Continuing Education Advisory Committee
- English Language Institute Advisory Committee
- e-Learning Advisory Committee
- Internal Research Advisory Committee
- External Research Advisory Committee

These committees and their operation will be discussed in more detail in their respective areas of this report.

3. **Needs Assessment / SWOT Analysis**

In order for DRDCE programs to be truly responsive to community needs and to operate efficiently and effectively, it is imperative that all planning undergo a rigorous analysis and needs assessment before programs are introduced. Such an assessment is known as a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Divisional staff, appropriate faculty and administrators, and the division's Operational Advisory Committees should be closely involved in any SWOT analysis that is undertaken for their area of responsibility.

A SWOT analysis outlines the type of needs assessment that should be used in the review and development of divisional plans. Individual decisions on programs by members of faculty or staff should not be allowed without this type of review, which is outlined in detail below. Each committee should perform this type of analysis periodically throughout the development and advancement of plans.

Two major areas for assessment should be curriculum development and partnership development. Standards for consideration in these areas are included below and can be used by committees in their considerations for curriculum:

- Review standards and benchmarks
- Determine logical scope and sequence for learning
- Articulate programs
- Assess program capabilities
- Determine whether a program meets the needs of students
- Identify changes and trends in the community
- Provide a database for decision-making and long-range planning
- Guide teacher/staff development
- Receive guidance in the selection of instructional materials
- Identify areas where curriculum areas can be integrated

The SWOT analysis should be the starting point for identifying potential programs. After programs are established, it should also review existing programs for effectiveness. The SWOT analysis is the traditional standard in plan development and should include the following:

a. Strengths

- What advantages does the organization have?
- What does the organization do well?
- What relevant resources are available?
- What do other people see as institutional strengths?

b. Weaknesses

- What could the organization improve?
- What does the organization do badly?
- What should the organization avoid?

c. Opportunities

- Where are the good opportunities?
- What are the predominate trends?
- Items to be considered include:
 - Changes in technology and markets on both a broad and a narrow scale
 - Changes in government policy related to the field being considered
 - Changes in social patterns, population profiles, and lifestyle changes

d. Threats

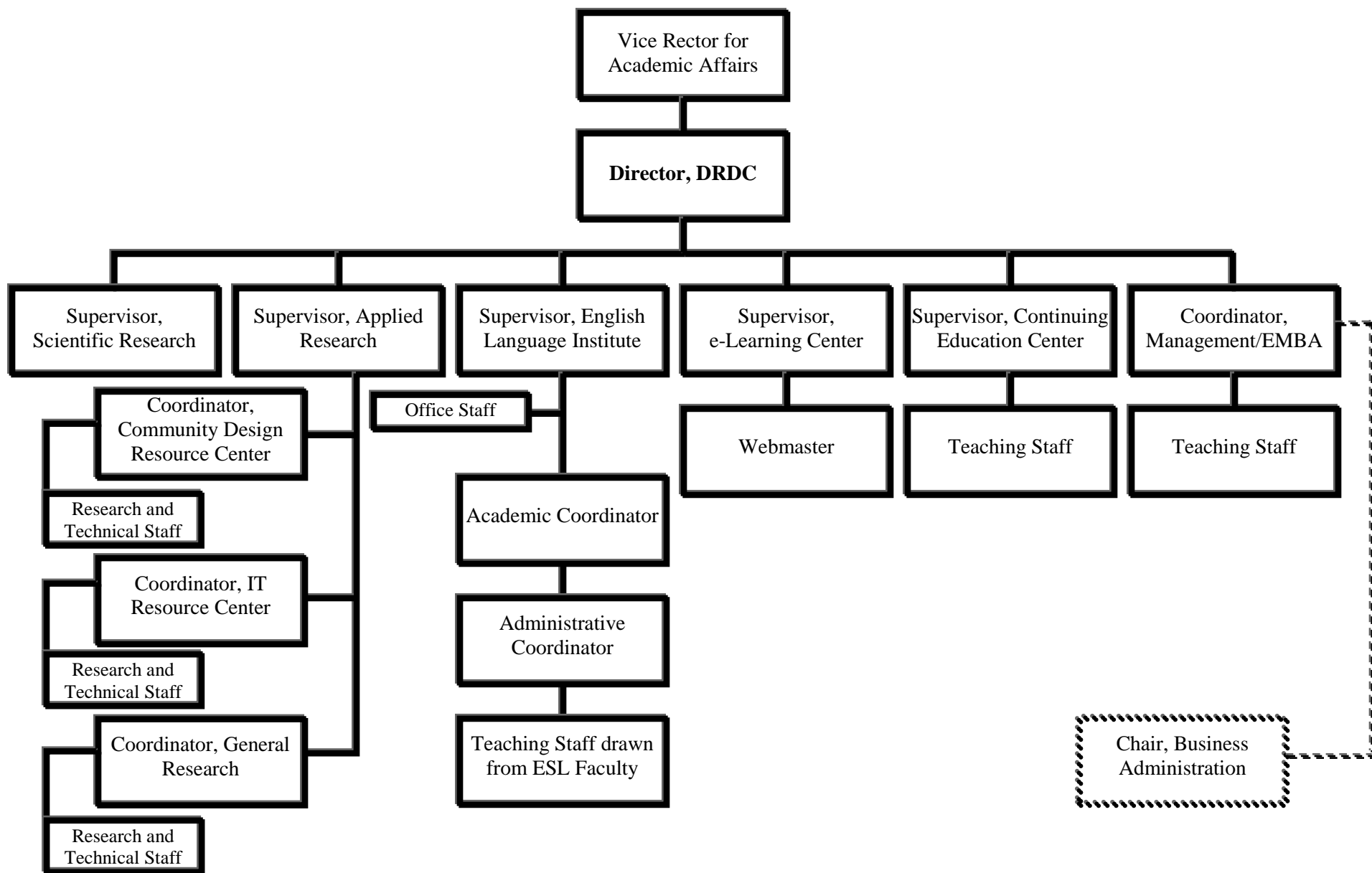
- What obstacles does the organization face?
- What are competing organizations doing?
- Are the required specifications for jobs, products, or services changing?
- Is changing technology a cause of change in the organization?
- Is the organization financially sound?
- Could any of the organization's weaknesses seriously threaten its business?

B. ORGANIZATION AND STAFFING

The DRDCE falls under the authority of the Vice Rector of Academic Affairs. It will be administered by the Director of Research Development and Continuing Education. The division will have two basic components that will be divided into several units.

While the division combines two functions at the outset for the sake of efficiency, it is recognized that at some future date, as the reputation of the university and the volume and complexity of programs grow, the DRDCE may be divided into a Division of Research Development and a Division of Continuing Education, each with its own director and staff.

An organizational chart representing the DRDCE at full operation is located on the following page.



**DRDCE STAFFING AT FULL OPERATION
PMU YEAR 4 (2009-2010)**

1. Research

Research will be divided into scientific research and applied research, with the division's focus on the applied. Although there may be increasing funds available for scientific research as the university matures, the initial opportunities will be in the applied research areas. This is where start-up resources should be directed.

a. Scientific Research

The division will employ a Supervisor of Scientific Research to oversee an area that will encompass research of particular interest to the faculty within the various colleges of the university. Research projects will be undertaken by PMU faculty assisted by students. The projects will be intended to help in the development and enhancement of the university's educational and training missions.

b. Applied Research

The division will employ a Supervisor of Applied Research to oversee three areas: 1) The Community Design Resource Center, 2) The Information Technology Resource Center, and 3) The General Research Center. Research projects will be undertaken by PMU faculty. Projects in the design center and the IT center will be conducted primarily by students as part of their internship programs. The focus of all applied research will be on specific problem solving in conjunction with individuals, industry and regional businesses.

2. Continuing Education

Continuing Education will be divided into three sections:

- The English Language Institute (ELI)
- The e-Learning Center
- The Continuing Education Center.

In addition, Continuing Education will work closely with the Chair of Business Administration in the College of Business Administration to offer the Executive MBA program.

a. The English Language Institute

The division will employ a Supervisor of the English Language Institute who will oversee an Academic Coordinator, Administrator, related office staff, and faculty. Faculty for the ELI will be drawn from the English-language faculty of the PMU Preparation Year Program. The numbers of male and female faculty will be determined by respective gender enrollments in ELI courses.

The ELI envisions the following catalog of courses that deliver the skills and training needed in the following four programs:

- General English Communication
- Professional English Communication for Business
- English Teacher Training
- English Teacher Certification

b. The e-Learning Center

The division will employ a Supervisor of the e-Learning Center supported by a webmaster and relevant technical support staff. The e-Learning Center will provide PMU with the opportunity to offer online courses and to expand resources for faculty development and delivery of courses. The e-Learning Center will offer a variety of online courses contracted from a variety of vendors.

c. The Continuing Education Center

The division will employ a Supervisor of Continuing Education who will work with appropriate staff, university faculty, adjunct faculty, and outside contractors (vendors) to deliver a variety of professional education and personal development courses open to the general public. The center will coordinate all of the courses not falling under the programs of ELI and the e-Learning Center

d. Executive MBA and Management Programs

The academic aspects of the part-time Executive MBA program including course development and recruiting faculty will be managed by the Chair of Business Administration. The division will employ a coordinator to manage the administrative aspects of this program including marketing, registering students, and collecting fees.

The coordinator also will work closely with the Chair of Business Administration, the Supervisor of the e-Learning Center, and the Supervisor of Continuing Education to offer non-credit management courses to the business community in the region surrounding the PMU.

C. GROWTH OF STAFF AND FACILITIES

1. Personnel

At start up the DRDCE will utilize a minimum number of staff, many of whom will be recruited from the PMU faculty on a part-time basis. As the offerings of the DRDCE grow in size and complexity, these part-time faculty may be promoted later to full-time staff or the DRDCE may choose to hire new staff from outside the university. A small number of full-time support staff will be required for DRDCE programs from the beginning. The Director will begin work in Year Three (2008-2009) of the university (as noted in the report *PMU Organization*). Supervisors of each operational unit should be hired during Year Three so that they will be ready to begin research and continuing education classes in Year Four (2009-2010).

A graphic representation of the recommended schedules for hiring DRDCE staff is presented in Appendix B of this report, DRDCE Staff Hiring Timeline.

Position descriptions for each of the staff members described in this section are located in Appendix A of this report, DRDCE Staff Position Descriptions.

a. **English Language Institute**

With opening proposed for the summer of 2007, the English Language Institute (ELI) will be the first program operated by the DRDCE. This early opening will be made possible by the existence of the English-language faculty in the PMU Preparation Year Program during Year 1 of the university, 2006-2007. The early opening will be made necessary by the likelihood that some students in the Preparation Year Program will have fallen short of meeting the entrance requirements to the university by only one six-week course.

If the PMU opens the ELI in the summer of 2007, students who have attained Level 5 in the six-level English language preparation curriculum can take the Level 6 course at this time and enter degree studies in September. Without this course, students would be forced take Level 6 during the next Preparation Year Program and wait a year to enter the university. It is likely that the PMU would lose these students as they may prefer to leave the university and study elsewhere.

In order to offer this program during the Summer of 2007, a member of the English faculty of the Preparation Year Program should be recruited as part time Supervisor of the English Language Institute during the Spring of 2007 (Year 1). Faculty to teach during the summer term also can be recruited from the Preparation Year Program once the number of students who

plan to take Level 6 during the summer is known. The Supervisor of the ELI should be managed by the Dean of the Core Curriculum and Preparation Year until the Director of the DRDCE is hired in the Spring semester of Year 2 (2008).

With a part-time supervisor in place and a growing English faculty in the Preparation Year Program, the PMU can begin offering English courses to the surrounding community in the Fall semester of Year 2 (2007). To accomplish this, the PMU should hire the full-time Academic Coordinator and the Administrative Coordinator of the ELI in time to begin work in September 2007.

Program descriptions for the ELI are provided in the section of this report on Continuing Education, Section V.E.1.m. Programs. A suggested schedule for implementing course offerings through ELI programs follows:

Fall 2007

- Beginning English Communication
- Intermediate English Communication
- General Business English
- Speaking Business English
- Writing Business English

Spring 2008

- Listening Comprehension
- Structure/ Written Expression
- Reading
- Advanced Listening/Speaking
- Advanced Reading/Writing

Fall 2008

- Applied Linguistics
- Methods in EFL
- Instructional Materials

Spring 2009

- Observation and Supervised Teaching
- Cultural Studies
- Proficiency Enhancement

b. Director

As outlined in the report PMU Implementation Plan, it is recommended that the Director of the DRDCE be hired toward the end of Year 2 (Spring 2008) in order to prepare for implementing programs during the university's Year 3 (2008-2009). By Year 3, many of the university's academic majors will be in place (Electrical Engineering, Mechanical Engineering, Interior Design, Information Technology, Computer Science Business Administration, and Management

Information Systems) and specialized, senior-level faculty will have arrived who can direct and participate in research and continuing education programs. By the following year, the remaining academic programs will have begun (Civil Engineering, Computer Engineering, Accounting, Finance, and the Executive MBA) and even more senior-level faculty will be available.

c. Research Development

Immediately upon his arrival (Spring 2008), the Director of the DRDCE should recruit two members of the university's scientific and technical faculty to serve part time as Supervisor of Scientific Research and Supervisor of Applied Research. These supervisors should begin working at the beginning of the PMU's Year 3 (Fall 2008) to build the university's research programs. As these programs grow, the part-time supervisors can be promoted to full-time status or the PMU can hire full-time supervisors from outside the university.

Many of the activities during Year 3 will be aimed at building relationships with businesses in the surrounding community in order to obtain both applied and scientific research projects. It is anticipated that these relationship-building activities will be conducted by the supervisors and the director, with little need for additional staff.

Applied Research: During the second semester of Year 3, however, it will become necessary to prepare for the opening of three specialized centers for applied research. Both the Community Design Resource Center and the Information Technology Resource Center must begin operation during Year 4 in order to provide senior-level students with community-oriented research and work-environment opportunities that fulfill internship requirements or electives in their majors. It will be appropriate at the same time to open the General Research Center to provide additional applied services by faculty and students to the businesses in the community.

In mid-Year 3, the Director of the DRDCE should recruit faculty members to serve as part-time coordinators of these centers. As the programs grow and evolve, these part-time coordinators may be promoted to full-time, or the director may hire full-time coordinators from outside the university.

Depending on the projects that come into the university's research centers, it also may become necessary to add Research Staff Members and Technical Staff Members to the staff. It is not anticipated that such staff will be required, however, before the middle of Year 4 (early 2010).

Though the Community Design Resource Center and the Information Technology Resource Center will be closely aligned with and actually located in academic departments or colleges, the General Research Center will likely begin as a “virtual” center with shared space and staff in a number of academic units. It is hoped, however, that this center will evolve fairly quickly into a center with a physical location similar to the others.

Scientific Research: The Division for Scientific Research also will begin in a somewhat “virtual” manner. Beyond the supervisor and some administrative support staff (likely shared with the general operation of the DRDCE) scientific research and opportunities for externally funded research will come from collaborations with faculty and staff based within each of the academic units. Hiring of research and/or technical staff will be opportunity-driven as externally funded, scientific research projects are identified and awarded. Early consideration of hiring administrative staff to support grant proposal writing and submission will likely take precedence over the research or technical staff, at least in the first year or so of operation.

A successful program of externally funded research will also drive hiring considerations of these staff as well. Ultimately, (potentially within the first two years of inception of the division) the first Science Research Center analogous to the Applied Research Centers will be created and supported through external funds. Within five years the goal should be to have three such science centers created and operational with fully sustainable support.

d. Executive MBA

The College of Business Administration’s Executive MBA is scheduled to begin operation in the Fall of Year 4 (2009), as outlined in the report PMU Implementation Plan. Though the academic aspects of the program will be directed by the Chair of Business Administration within the college (see the report *Executive MBA Curriculum Design*), the marketing, logistics, and other aspects of the program’s delivery will be provided by the DRDCE. It will therefore be necessary to hire a full-time coordinator of the Executive MBA Program to work within the DRDCE at the middle of Year 3 in order to prepare for the opening of the program in Year 4.

e. Continuing Education

Shortly after selecting the faculty members who will head the university's initial research efforts, the Supervisor of the DRDCE should make a similar part-time faculty appointment for the Supervisor of Continuing Education. This appointment should be made in the middle of Year 3 (early 2009) to lay the groundwork for the PMU's continuing education programs. As the programs grow and evolve, this person can be promoted to full-time, or a full-time supervisor can be hired from outside the university.

Planning, organizing, and marketing these programs will require some time. It is therefore expected that continuing education classes will begin in Year 4 (Fall 2009), a year following the hiring of a supervisor. In the beginning, contract programs are suggested as a means to streamlining the implementation of programs.

Exact start-up times will be determined by the ability of program providers to recruit faculty and identify classroom space the community. However, it is expected that health care programs may be started during continuing education's first year with nurse assistant and medical assistant programs. In general, growth of continuing education will be governed by the availability of faculty and the success of early programs in meeting community needs. Program enrollments and course evaluations should guide the evolution of continuing education.

f. eLearning Center

Concurrent with the establishment of the continuing education program, the Director of the DRDCE should recruit a faculty member to serve as part-time Supervisor of the eLearning Center. As the eLearning program grows, the part-time supervisor can be promoted to full-time, or a full-time supervisor can be hired from outside the university.

Immediately upon beginning work in eLearning, the supervisor should hire a full-time Webmaster to serve as the technical expert for the program's online offerings.

Implementation of the eLearning Center can progress quickly after hiring the Supervisor and Webmaster. Most vendors have course materials already developed that can be accessed almost immediately after a contract is signed with the university. The main task for the supervisor and webmaster will be to structure the university's site consistent with their marketing and administrative strategies. This means that the eLearning Center could be started within a year of these positions being filled. Working with the director, the supervisor and webmaster should establish the division's priorities for course implementation based on community needs and vendor support.

2. Facilities

The initial staff for the entire division will be housed in offices in the Learning Resources Center. Offices should be arranged in a central configuration to enable the staff to share some general office support and administration.

In its early years, Applied Research and Scientific Research will be able to utilize existing laboratory space in the College of Engineering and the College of Information Technology. However, growth of contracted services is forecast to be great. The planning and establishment of the DRDCE, therefore, should include construction of a Research Center dedicated to contracted activities. Depending on its volume, Scientific Research may remain in the academic laboratories or be relocated to the Research Center.

The ELI and CE programs will utilize existing university classrooms, which should be available in the evening and on weekends, when many of these courses will be offered. Additionally, the university should schedule as many courses as possible in community locations as dictated by the community needs.

As the Executive MBA program is developed, it will utilize existing classrooms in the College of Business Administration.

Classes offered by the e-Learning Center will be online and will not require classroom space. Its administrative offices in the Learning Resource Center must have broadband network access.

D. MARKETING

The marketing plan for the DRDCE will be orchestrated by the director of the division and coordinated with the Vice Rector of Institutional Development and the department of public relations. It will also be the responsibility of the director to work with the supervisor of each of the division's units to ensure that the appropriate advisory committees are actively involved in the development of marketing plans. The participation of these committees will be key in helping to identify potential markets, community changes, and trends.

Marketing plans should be continually updated at least yearly in order to reflect any major changes in the university or the populations being served. An effective plan is anchored to the goals of the division and its individual units and should provide the foundation for activities that provide value to the community. Effective marketing plans identify options, prioritize resources and choose the best opportunities.

1. Program Planning and Analysis

Effective marketing starts with effective program planning and the SWOT analysis outlined in Section III.A.3, Needs Assessment / SWOT Analysis, of this report. The resulting marketing plan will be utilized to:

- Identifying target populations
- Identifying needs/user orientation
- Resources should be leveraged to support strengths
- Weaknesses should only receive limited resources

Each unit of the DRDCE will be involved in the marketing process. Planning will include the development of a clear identity for the continuing education and applied research units of the division. Branding is very important for the university in general, and this division should be able to contribute greatly to the community perception of quality programs. Elements that should be emphasized in marketing programs include:

- Types of services
- Program
- Location
- Vision of services
- Student-orientated reputation and responsiveness to needs
- Problem-solving reputation
- Assessment-based programs

2. Marketing Plan Checklist

The following checklist that can be used throughout the division to review marketing plans. A marketing plan for continuing education should address these questions:

- Who is being served? What are the right sets of potential students?
- What are their needs and priorities? What is a meaningful value proposition and brand promise?
- How can quality programs be provided cost effectively?
- Are outside conditions right for the university's programs?
- What is the most convenient way to bring the programs to the market? How can the programs be best delivered to fulfill the brand promise?
- What are the best ways to inform the market about the programs?
- How will the university measure whether or not the market is satisfied?
- What can the university do to make things even better?
- How can the program become the student's first choice?

3. Traditional and New Media

The foundation of advertising and promotion should be anchored in traditional basic activities. These activities will be the core of the marketing effort, but they should not prevent the exploration and evaluation of innovations in new media:

- Public service calendars in publications
- Organizational newsletters and announcements
- Newspaper, radio, and television ads
- Public service announcements
- Communication exchanges between organizations
- Informational bulletins and newsletters
- Informational symposiums

New media should be an emphasis for all PMU marketing efforts, as they will reinforce the university's identity as a leader in infusing education with technology. New media for advertising that should be considered exist principally in Web-based marketing and communication. New distribution formats in DVD and other forms of compressed technologies should be included as well. Among the new media that the DRDCE should consider are:

- Teleseminars
- WebCasting
- eZines
- Blogs
- Date Base/Niche

The e-Learning Center should lead the division in developing new marketing methodologies. These technicians initially can be supported by the center's webmaster and technical staff.

4. Referrals, Partnerships, and Collaboration

The most important element of all marketing efforts is one-on-one involvement with business and community entities. Referrals are the best form of advertising and should be promoted with all of the division's activities. Key marketing should be considered in combination with internships and practicums. Students working in the community can be excellent spokespeople for the school. They also can bring information back to the university to support needs analysis.

Partnerships and collaboration with the private sector and with other universities will be important both to marketing efforts and to the development of programs. Input from DRDCE committees will be instrumental to developing successful relationships.

Considerations that should be made when considering various partnership and collaborative relationships include:

- Establishing a list of the greatest needs of the organization that might be obtained through a partnership
- Establishing a list of the greatest assets you might offer a partner or collaborator
- Creating a prioritized list of potential partners
- Developing a collaboration agreement including:
 - Time and contract period
 - Non-competition rules
 - Listing of division of labor
 - Description of how money/assets will be handled

E. DELIVERY OF SERVICES

1. Traditional Service Delivery

Traditional service deliveries such as technology assistance, research and analysis, technology certification, and continuing education in which businesses, professionals, or students approach the university and receive their service at the PMU campus, will be an integral part the DRDCE structure. Networking, marketing, and other forms of outreach and publicity will attract these customers to PMU for on-campus services provided by most other academic and research institutions.

However, PMU should also provide services directly to customers. Wherever possible, these services should be delivered at the customers' places of business or at satellite centers or campuses convenient to customers and their needs. Such services as specialized human resource training, accreditation, management consultation, and technical evaluations provided by PMU and the DRDCE will be particularly appropriate for delivery in arrangement whereby the PMU faculty and professional staff travel to industrial and business customers in the region.

2. Industrial Outreach

Industrial outreach programs such as those described in the previous paragraph, in which professional engineers and/or technical staff work closely with industry, will help establish dynamic interactions between the PMU and private sector partners. When properly nourished, such partnerships will lead to increasing numbers of courses, training programs, and certification offerings being requested at the large industry sites in the region or at associations of small businesses.

3. e-Learning and Hybrid Courses

Appropriate DRDCE services in language, training, and continuing education will also be conducted in formats that combine e-learning technologies with traditional face-to-face learning methodologies. These will be appropriate when time and distance precludes solely on-campus or on-site instruction. Such hybrid learning methodologies are of growing popularity throughout the world as flexible use of time both in the workplace and at home maximizes the efficiency of learning materials. While regular Internet connectivity can be used effectively for such hybrid courses, advanced Internet connectivity offers opportunities and enhanced learning and research capabilities such as grid computing or interactive video conferencing that should also be integrated into the PMU's outreach and partnering activities.

4. Advanced Internet Connectivity

a. In the Region, the Kingdom, and the World

High speed, broadband advanced Internet connectivity to the region and beyond will be essential to the mission of the university in establishing appropriate partnerships for research and continuing education. Advanced, optical fiber Internet systems operate at data exchange and communication speeds that exceed normal modem, cable or DSL Internet by several orders of magnitude. For instance, DSL and cable Internet connectivity operate between 100 to 200 Kbs or lower, whereas OC3 advanced Internet speeds operate at 150 Mbs, roughly two orders of magnitude higher. International standards are now moving to OC48 and higher. This will move data in the Gigabit per second and even the Terabit per second range.

A research network of this type will allow for secure and controlled point-to-point communication among partner institutions (university, government and/or industry), which will allow for research and education opportunities such as:

- Interactive distance education and training courses, including continuing education and certification courses with industry..
- Remote instrumentation operation and sample manipulation.
- Data transfer and analysis in near real time.
- Distributed storage of information and data.
- Geographic Information System (GIS) technology use for large area systems and environmental/resource analysis and modeling.
- Simulation and modeling analysis for transportation, industrial processing, and other uses.

b. Advanced Internet and Academic Partners

The use of high speed Internet is limited only by the imagination of its users - the faculty and staff of the PMU in partnership with appropriate institutions or organizations in industry, other universities, and/or government.

For instance, advanced connectivity will allow the PMU to conduct research and take advantage of equipment and resources such as the advanced electron microscopy services at the King Fahad University of Petroleum and Minerals (KFUPM) or to use other advanced instrumentation and data analysis capabilities without having to make the high capital investment associated with such facilities. Additional

information on the opportunities for connectivity using advanced Internet networking can be found at www.Internet2.edu.

c. Advanced Internet and Industrial Partners

Partnerships with industry as well as other academic institutions will also facilitate data and information exchanges on specific projects or technology development. This is of interest particularly when the data sets are complex or extremely large. For instance, video conferencing, which is important for interactive distance education (e-learning) is extremely limited when normal Internet connectivity is used. However, it easily integrates into classroom or demonstration scenarios using advanced Internet.

This will be important not only to research and activities that involve technology service but to education and continuing education activities as well. The PMU should take advantage of existing fiber networks in the region (for example, the fiber infrastructure and high speed Internet connectivity within the Saudi Aramco Corporation or Saudi Electric). The university also should develop plans for establishing university-owned fiber networks in the region that are appropriate to their anticipated educational and technology driven needs.

F. FUNDING DRDCE ACTIVITIES

The DRDCE should be viewed as an investment by the PMU, not only in outreach and training but also in establishing linkages with the community and region. These linkages will have long term payoffs both strategically and economically.

Initial costs will have to be borne in large part by the PMU. However, the evolving partnerships and community links developed through the DRDCE activities will eventually produce revenue. These revenues first will pay for ongoing activities. Eventually, they will allow for additional growth and development, as sponsored contracts and funding grow, as new scientific and applied research centers are created, and as intellectual property leads to new business and industrial ventures.

While this process will not occur overnight, proper nurturing of partnerships along with the development of research and continuing education programs that meet community needs will lead to a self-sustaining research and continuing education enterprise. Key to this will be the early involvement of critical members of the industrial and business community on the PMU external advisory structure.

IV. RESEARCH

A. INTRODUCTION

Research at the PMU should be seen in the context of its mission to the Eastern Province and the KSA with emphasis on a strong inter-relationship to the region's business and industrial sectors and the region's economic development interests. Research should also be seen in the context of the educational and outreach missions of the university where research projects undertaken and conducted by its faculty and staff will be strongly focused and driven by those missions. In particular, partnerships with the community – the private sector, other academic institutions, and the governmental sector – will be a key part of any research and technology service providing carried out by the research component of the university.

The research activities of PMU will be guided by internal and external advisory committees to be created along the following parameters:

1. Internal Research Advisory Committee

This committee will be made up of the deans of the Colleges of Engineering and Information Sciences; the coordinators of the Community Design Resource Center, the Information Technology Resource Center, and General Research Center; faculty members experienced in research; and such other officials as determined by the Rector or the Vice-Rector of Academic Affairs of the university. The Internal Research Advisory Committee will report to and provide advice to the Director of Research and Continuing Education. The Supervisors of Scientific Research and Applied Research will be ex-officio members of the Internal Research Advisory Committee. This committee will be expected to meet at least four times per year. Among its duties will be to:

- Work with the Director of the DRDCE, the Supervisor of Applied Research, and the center coordinators develop a strategic plan of research and technology outreach for the PMU
- Help identify appropriate areas of research and technology application appropriate for the faculty and facilities of the PMU.
- Provide appropriate interaction between the academic programs and the research opportunities, including capstone projects for seniors and related internships as appropriate to providing real life experiences for PMU students.
- Help in establishing appropriate policies and regulations regarding involvement of faculty in research, technology applications and services, and external technological consultations.

- Help develop appropriate policies regarding intellectual property (IP), including ownership, sharing of licenses, and royalty resulting from IP created by PMU, and other activities related to IP. The committee will also provide advice on development of strategies and policies to enhance technology transfer of any IP created by the PMU.
- Working closely with appropriate faculty and academic administrative staff, provide advice to help coordinate the use of laboratories and facilities required for both teaching and research applications.
- Oversee other purposes or duties as requested by the Rector, the Vice Rector for Academic Affairs, or the Director of the DRDCE.

2. **External Research Advisory Committee**

This committee will be made up of representatives of the regional and local community to include the following:

- Business and the private sector community (four to six representatives), including sectors likely to utilize the services of PMU technology services. These are expected to include interior design, information technology, light industry, heavy industry, petroleum, and manufacturing.
- Private, non-profit economic development associations such as the local chamber of commerce, regional development agencies, and other associations as appropriate
- Economic development agencies associated with local and regional government
- Small business associations
- KFUPM research divisions
- Banking and financial interests.

The External Research Advisory Committee will report to and provide advice to the Director of Research and Continuing Education. The Supervisor of Applied Research will be an ex-officio member of the committee. This committee will be expected to meet a minimum of twice a calendar year. Among its duties will be to:

- Work with the Director and Supervisor of Applied Research, and the center coordinators to review and update the Strategic Research Plan developed with the Internal Research Advisory Committee, with particular focus on its relevance to local and regional economic development strategies.

- Provide advice and consultation in developing appropriate internships and capstone projects with local and regional businesses that provide meaningful real life experiences for PMU students.
- Help identify opportunities for partnerships to support the research and academic interests of the PMU
- Help market and promote the PMU's technology outreach, service and research activities with local, regional, and national business interests.
- Work with the PMU to promote the transfer of any technology or IP created by the university for the development of regional and local businesses or manufacturing industries.
- Oversee other purposes or duties as requested by the Rector, the Vice Rector for Academic Affairs, or the Director of the DRDCE.

B. OPERATIONAL UNITS

1. Overview

The PMU research component will be part of the Division of Research Development and Continuing Education (DRDCE). Research will be divided into two areas: Scientific Research and Applied Research. A professional staff person with the title Supervisor will oversee each of the two areas. Initially, the technical staff required for each areas will be drawn from the staff required for the academic laboratories and centers that serve the university's teaching mission.

The following sections contain summary position descriptions for research staff. Complete position descriptions for each of the staff members described in this section are located in Appendix A, DRDCE Staff Position Descriptions.

A graphic representation of the recommended schedules for hiring DRDCE staff is presented in Appendix B, DRDCE Staff Hiring Timeline.

a. Research Staffing

Selection of the appropriate professional staff, particularly at the Supervisor and Coordinator levels, will be critical. Persons selected as Supervisor of Scientific Research and Supervisor of Applied Research should be experienced in applied sciences and engineering research, respectively, with strong industrial and/or private sector experience.

The need for scientific research staff will be met by the technical support identified in the various academic labs in the College of Engineering (mechanical, electrical and civil) and in the College of Information Technology. In addition the Community Design Resource Center and the Information Technology Resource Center will have their own professional coordinators and staff to support applied research activities within those centers. It is anticipated that a new Center of General Research within Applied Research will require at least one professional engineering coordinator and potentially one or two support staff personnel.

b. Staff Qualifications

Research staff in each of the centers will have research experience at the academic level and, preferably, in the private sector as well. The degrees and/or experience required and duties for each research position will be as follows:

- **Supervisor:** The Supervisor of Scientific Research and Supervisor of Applied Research will hold a minimum of a Master's but preferably a PhD in a relevant area with a minimum of 10 years research experience beyond their terminal degree. Supervisors will oversee and be responsible for the general operation of the centers and the research activities within their respective areas. Working with the Director of DRDCE the supervisors will
 - Develop operational policies for their divisions
 - Develop areas of focus for research and technology service
 - Manage the day-to-day activities for their units
 - Coordinate with the academic laboratories and facilities regarding the conduct of externally funded research or technology services
 - Work with the local and regional private sector interests to establish appropriate funded programs and projects for their centers
 - Provide support and advice as needed by the Director of the DRDCE
 - Perform such other duties as required by the Director of the DRDCE or Vice Rector of Academic Affairs.
- **Coordinator:** Coordinators of the three centers will require a graduate degree or degrees in appropriate technical fields or engineering with a minimum of seven years experience beyond the final degree. This experience should be primarily in the private sector in the case of the Coordinator of General Research. The center coordinators will:

- Oversee and manage the day-to-day activities of their respective centers
 - Supervise and manage research and technology service programs
 - Carry out as required specific tasks individually or lead appropriate teams in carrying out those tasks
 - Work with the supervisor and other managers in developing programs of research and service with outside entities
 - Perform such other duties as required by the supervisor or Director of DRDCE.
- **Research Staff:** Holders of these positions should have at a minimum a bachelor's degree in a relevant technical or engineering field with a minimum of five years of experience in industry. Research staff will carry out actual research or technology service required in the externally funded projects, including but not limited to:
 - Conducting studies, relevant research, and data gathering as required
 - Providing reports and other documentation as needed by clients of the centers
 - Participating in specific research or technology service projects as assigned by the coordinator
 - Working with the coordinator or coordinators in developing and providing input to new projects or tasks for the center
 - Working with faculty and students as appropriate in carrying out research and technology service
 - Performing such other tasks as appropriate within their centers or work units.
 - **Technical Staff:** Holders of these positions will possess a minimum of an associate (two-year) technical degree with a Bachelor's degree preferred and/or a minimum of five years experience in their field within industry or academia. The technical staff will:
 - Maintain and operate specialized equipment as required by their centers
 - Conduct experiments, data gathering, and analysis as required
 - Work with faculty and students as appropriate in carrying out research and technology service
 - Perform such other tasks and activities as appropriate within their centers or work units.

c. Space and Infrastructure Support

Space and other infrastructure support for the DRDC research centers must be identified within the existing master plan of the university. Utilizing existing facilities will allow for maximizing the potential research in both Scientific Research and Applied Research will minimize the start-up costs for the overall research enterprise since most of the costs already will have been incurred for the academic divisions of the university. This model also provides flexibility in allowing for growth as the research enterprise becomes successful in providing service and obtaining ongoing funding for its activities.

2. Scientific Research

Scientific Research will encompass research that is of particular interest to the faculty within the various colleges of the university. It will be intended to help in the development and enhancement of the colleges' educational and training missions. It also is intended to promote faculty professional and academic development, maintain current their understanding of their respective areas of academic interest and expertise, and otherwise help in the development and enhancement of academic excellence for their teaching and other professional duties.

Over time, various centers of scientific research are expected to evolve as funding and opportunities develop through the specific research activities of the faculty. Initially, however, much of this research is expected to be carried out with or related to research conducted as part of Applied Research activities, utilizing equipment and facilities of the academic laboratories.

3. Applied Research

Applied Research will include, at least initially, three centers: the Community Design Resource Center, the Information Technology Resource Center, and a General Research Center. Each of the applied research centers will focus on providing research and technology services in their areas of expertise to the community. Specific problem solving would be identified for industry and regional businesses with the following general characteristics:

- Short-term problem solving of roughly one-to-six months (or shorter, depending on the specific problem or task).
- Projects, where possible, would have an education and training component for students as part of the research or service process. This could be accomplished as:
 - Part of a senior or “capstone” project
 - Internships for upper class students.
 - Paid employment or work-study for students.

Possible areas of applied research and technology service can be derived from the capabilities and expertise incorporated within the undergraduate engineering and information technology laboratory facilities. Such areas might include:

- Characterization of industrial materials, including metals, ceramics, polymers, cements and soils. This would include analysis of:
 - Chemical characterization, including corrosion resistance and susceptibility.
 - Structural morphology of industrial materials, including metals, ceramics (cements). and polymers (plastics, composites)
 - Mechanical issues, including, tensile Strength, compression, and fatigue
- Failure analysis of systems, components, and structures or materials.
- Systems design and analysis
- Computer software development and design
- Mechanical system design and analysis
- Transportation
- Civil infrastructures
- Non-destructive analysis (NDE)
- Power: production and transmission
- Energy issues, including conservation and alternative energy systems such as:
 - Solar
 - Wind
 - Thermal
 - Environment
- Environmental impact assessment studies
- Improved manufacturing and industrial processing for sustainable growth
- Environmental quality control in manufacturing
- Accreditation and training (ISO9000)

C. FACILITIES

1. Special Needs

While initial requirements for research space will be modest, with much of the research activity taking place in laboratories and using equipment with dual use capabilities for both teaching and research, it can be expected that space requirements in terms of laboratories, offices, and general work space will expand with the growth of the research and technology services offerings of the university.

It is therefore important to identify and set aside in the short term adequate space for the General Research Center. Because they also exist to serve the internship and practical experience needs of students, the Community Design Resource Center and the Information Technology Resource Center will be housed in their respective academic buildings. Because it will involve both male and female students, the IT center will be housed on both the male and female sectors of the campus. The design center, which will involve only female students, will be housed on the female sector of the campus.

Space designated for the General Research Center initially will remain flexible and expandable to meet the needs of this growing enterprise. The space must be outfitted with appropriate infrastructure support, including research ventilation hoods, liquid nitrogen, various research gases and expendables (oxygen, nitrogen, argon, among others), chemical storage units, computer equipment and data /storage modules/servers, and other equipment as required. Initially the General Research Center will be co-located with or near the academic laboratories within the colleges of engineering or information technology. Because of the need to work closely with existing businesses, it is anticipated that the center will be located on the male sector of the campus.

Eventually, it can be expected that additional centers will evolve in accordance with the strategic planning of the university and as research and technology requirements are identified and successfully funded through partnerships and collaboration with industry and others.

Potential future centers of research that may evolve with time include:

- Center for Refining and Petrochemicals
- Center for Petroleum and Minerals

- Center for Environment Issues
- Center for Engineering Research
- Center for Business and Management
- Center for Communications and Technology

Facilities and instrumentation associated with the College of Engineering and the College of Information Technology that will have potential relevance to research will include but will not be limited to:

Civil Engineering

- Soil testing (chemical and mechanical) equipment
- Cement characterization (chemical and mechanical)
- Hydrological software and testing
- Geotechnical engineering software and testing equipment

Mechanical Engineering:

- Tensile and compression testing machines (10-20,000 kilograms)
- Fracture testing (Charpy v-notch)
- Fatigue testing (dynamic tensile and compression testing)
- Corrosion
- Metallograph and optical microscopes for materials structural evaluation
- NDE analyzers
- CAD/CAM software
- Pressure and fluids measurement

Electrical Engineering:

- Combustion engine analyzer, power, fuel consumption and related equipment
- 50 W dual output power supply
- Power generation and transmission testing equipment
- Circuit power transformers
- Power transformers
- Current generator and motor characteristics
- Three-phase induction motors
- Two channel, 100 MHz oscilloscopes

- Two channel FFT dynamic signal analyzers
- LCR meters
- Universal frequency counters
- Wave form generators
- Communication and signal processing equipment

Information Science and Technology:

- Servers, for example: Power Edge 4600, Sun E450/E250, Dell Precision
- Networking infrastructure
- Data storage hardware and software
- Workstations: for example: Pentium 4, 2.8 GHz or greater, Sun Ultra 5, and other computational units as required

Additional detail and information related to academic laboratory requirements is contained in the reports *Undergraduate Engineering Curriculum Designs* and *Undergraduate Information Technology and Computer Science Programs*.

2. **Instrumentation**

While equipment dedicated to teaching in engineering and information technology will suffice for most expected areas of research, some specialized instrumentation and facilities must be incorporated into the research infrastructure of the university. Such equipment should be identified in appropriate consultation with the research and academic advisory committees (internal and external) so as to maximize the benefit to the research and education community while minimizing costs. Among equipment or instruments that might be included are:

- High resolution, scanning electron microscope (SEM) with an environmental stage/analyzer for material and product characterization analysis, among other things.
- Energy dispersion analyzer for elemental analysis
- X-ray spectroscope for elemental analysis
- X-ray diffractometer with goniometer and tilting stage
- Microhardness testers for mechanical characterization of materials
- General use IT equipment including: servers, data storage, networking, work stations, simulation packages, parallel computing capabilities
- High-performance IT equipment including: IBM eServer pSeries, 2TB disk storage; SGI Origin 2000; Beowulf clusters with 4 nodes; HP Itanium, Dual Xeon processor, or other specialized IT equipment as required

- Mechanical: Dynamic tensile/compression testing equipment for materials advanced mechanical behavior research
- Chemistry
 - Gas spectrograph
 - Gas chromatograph
 - Microprobe analyzer

3. Future Addition of Dedicated Research Space

As noted above, space requirements for research can be expected to outstrip the space available in academic labs in a reasonably short time. As research requirements and contractual, sponsored funding grow, investment in new research space will be required, in addition to the purchase of additional specialized equipment.

A building dedicated specifically to research should be between 2,500 square meters (sm) and 5,000 sm at a minimum. Of this space, approximately half to two-thirds should be devoted to laboratory space and the remainder to office and administrative space for faculty, students, and research and technical staff. Commonly, between 50 sm to 100 sm is required for each of the specialized research equipment such as those noted above ? microprobe analyzer, x-ray single crystal analyzer, high resolution scanning microscopes and others. These areas should be environmentally controlled for temperature and humidity and vibrationally quiet with specialized concrete pads or other support structures on the ground floor level. The building should contain adequate space for expanding and adding specialized components or experimental stations to the major instruments themselves.

Specimen preparation facilities adjacent to the instruments also will be required. These should be equipped with special ventilation, inert gas, coolant gases such as liquid nitrogen or helium, and specialized power supplies. Laboratory space with hooded ventilation for dealing with toxic chemicals or materials should be provided in roughly one-quarter to one-third of the research area.

Mechanical testing facilities will require flexible and relatively open space with ceiling heights at six to ten meters, which is roughly double those of regular labs or office space. The extra height will be necessary to accommodate specialized equipment such as dynamic testing equipment. Metallurgical or industrial processing facilities also will require specialized ventilation for ovens or furnaces, hooded lab spaces, and other specialized facilities depending on the nature of the research (corrosion, fatigue, or creep, for example) being conducted.

In general, with the exception of specialized instrumentation facilities, research space and offices should have movable walls in order to allow for adjusting space to meet the needs of specific research projects. Such flexible space will allow for better and more effective use of limited research space, especially in the initial years of growth and development of research centers.

It is premature at this point to speculate on when such a building may be needed. It can be stated, however, that the building should be constructed on the male sector of the campus if land is available in this area. Alternatively, space may be available in the vicinity of the athletic fields, or space may be provided off campus.

D. OUTREACH, MARKETING, AND PARTNERSHIPS

1. Primary Strategy

PMU's research mission will be strongly focused on outreach to the industrial and private sector interests of the region. Research activities will be largely sponsored and funded through partnerships with the regional and national private sector. Primary emphasis will be contracted work to solve industry problems in both the short and long term. The university therefore must develop a marketing strategy that communicates effectively to the business community how the PMU differentiates itself from other public and private academic institutions within the region in providing technological service and continuing education.

2. Certification and Training Programs

One way to accomplish this will be through certification and training programs that provide accreditation based on international standards to local and regional industry. Such standards include ISO 9000 and QS 9000 quality standards for industry. Other accreditations and training will depend on the expertise and evolution of the engineering and technology staff working in the Applied Research Division of DRDCE.

3. Developing Partnerships with Industry

The Applied Research Centers will develop partnerships with local and regional business and industry interests that are based on the linkages and networking developed in the region. Partnerships also will evolve through the continuing education curriculum offered by PMU. In some instances, new linkages for research and technology services will develop from contacts made through continuing education. In other instances, continuing education opportunities will develop through research and technology contacts. Such partnerships will require strategic planning and will rely heavily on the advice provided by the external advisory committee. They will be heavily weighted toward the private sector of the region. These partnerships will have as basic tenets the following characteristics:

- Linkages based on mutual needs
- Strategic interests for both parties
- Opportunities for sustainable growth and development

4. Creating A “One-Stop-Shop” for Manufacturing and Industrial Services

Partnerships will help regional manufacturers and PMU by providing expert help that small and mid-size manufacturers otherwise could not obtain, and by providing university students with valuable hands-on experience. PMU will aggressively expand its manufacturing service capabilities by creating partnerships in areas such as training, financing, international trade, and environmental and information systems in order to complement core technical support services to be created.

The goal of the Applied Research Center(s) will be to create a "one-stop-shop" for manufacturers seeking to become more productive and competitive. (Additional information on industrial outreach strategies and examples can be found at the Texas Manufacturing Assistance Centers website: <http://www.tmac.org/>).

E. INTELLECTUAL PROPERTY

1. Building Intellectual Capital

Until the university's has developed its own independent portfolio of intellectual property (IP) and patents, entrepreneurial activities such as start-ups and incubators will rely heavily on establishing key partnerships with the private sector or other institutions and organizations. In this start-up stage, PMU can assist with the additional research and prototyping necessary before IP is ready for actual marketing.

Such research into product development will open opportunities for faculty and staff to gain invaluable experience. Research also will create key linkages with the business and industrial community. It should be recognized that technology transfer and entrepreneurial enterprises will require patient and ongoing nurturing for a period lasting upwards to ten years or longer before return on the investments can be realistically expected.

2 Using IP to Generate Revenue

IP created by the research activities of PMU faculty and staff can be expected to eventually generate additional sources or revenue and income for reinvestment in the university's research enterprise.

Intellectual property is defined as any invention, discovery, trade secret, technology, scientific or technological development, computer software, or other form of expression that is in a tangible form. Intellectual property can be protected by patent, trademark or copyright laws or as a trade secret related to “know how” in applying technology.

A patent is the usual method of protecting intellectual property. Patents are granted by individual governments and give the holder the exclusive right to exclude others from the manufacture, use, and sale of the invention within the country in which the patent is granted. As property it can be sold or assigned, pledged, mortgaged, licensed, willed or donated, it can be the subject of contracts and other agreements.

When a person or an institution secures a patent, there is an opportunity to profit by the manufacture, sale, or use of the invention in a protected market or by charging others for making or using it. Such profit can be reinvested or used as a mechanism for economic development and growth both of the institution or the region in which it is used. As such the development and patenting of such IP should be supported and encouraged by the university from its inception.

3. IP Policies:

The university will be able to realize the benefits of IP in part through policies and activities developed by the administration and the university’s internal and external research advisory committees. Among other items, these policies will include:

- Ownership and sharing of licensing and royalty fees.
- Responsibility for costs of patenting and licensing of IP, normally assumed by the university but repaid from licensing and technology transfer activities
- Development of technology transfer strategies to encourage entrepreneurial developments
- Creation of incubators and technology accelerators for regional economic development

A sample intellectual property handbook produced by a university to state IP policies, can be found at:

http://www.utsystem.edu/bor/rules/MasterRRR.htm#_Toc8856043

V. CONTINUING EDUCATION

A. INTRODUCTION

Continuing Education (CE) at the PMU should be seen in the context of the University's mission and its relationship to the business and general community. It will serve as an important arm of the outreach mission of the university and as a partner with the community in the development and delivery of programs. As with the DRDCE's research activities, continuing education will bridge the gap between the private sector, other academic institutions, and the governmental sector.

The three main components of CE will be the English Language Institute (ELI), e-Learning Center, and the Continuing Education Center.

The ELI is presented in detail in this report as a means to enabling a fast-start implementation of English language programs to help establish the division's presence in the community. The e-Learning Center will provide the ability to quickly establish a complete online program by working with outside vendors established in national and international distance education arenas. The Continuing Education Center will oversee all other courses at the start-up of the division. As programs increase in size and the university's Executive MBA program matures, the Continuing Education Center should be divided into additional program units to support the Executive MBA and other specialized programs as developed by the various colleges.

CE activities of the PMU will be guided by internal and external advisory committees to be created along the following parameters:

1. Continuing Education Advisory Committee

With the consultation of the Executive Advisory Committee, a Continuing Education Advisory Committee should be established. This committee will be composed of key DRDCE staff and representatives of colleges, departments, and faculty groups involved in the delivery of CE courses. Included should be the Director of the Continuing Education Committee as the chair, and a representative of each of the CE operating units: the English Language Institute, the e-Learning Center, management and Executive MBA programs, and the undergraduate colleges of the university.

The initial plan for continuing education will create a separate English Language Institute Advisory Committee, but additional operational committees should not be necessary during the start-up years. This committee will act as the overall advisory committee for all continuing education activities. Additional committees will be added under the category of continuing education as they are needed.

2. Unit Advisory Committees

Expansion of programs should dictate the number of committees needed. Full-implementation of continuing education will eventually require additional committees for:

- e-Learning Center
- Management/EMBA
- Information Technology
- Engineering
- Interior Design

The number of committees and their membership will be determined by the Director of the DRDCE in consultation with the Executive Advisory Committee. Each committee will serve in an advisory role to its respective operational unit.

Initial discussions of each committee should include the development of a SWOT analysis that examines their operational environments through a comprehensive needs analysis. The procedures involved in a SWOT analysis are explained in Section III.A.3, Needs Assessment / SWOT Analysis, of this report.

In conducting the analysis, committee members should brainstorm and discuss the unit's strengths, weaknesses, opportunities, and threats. The committee should develop the answers to the questions presented in Section III.A.3 or similar questions developed by the group.

B. CURRENT AND RECENT TRENDS

Continuing education needs to be flexible to the fast-changing environment of the KSA and the world. Staff should constantly work with the division's committees of external constituents to keep abreast of community needs. Relevant factors that should be continually considered include:

- **Capabilities of technology** – Technological advancements have resulted in an increasing use of learning and teaching strategies that exploit the capabilities of technology. Infrastructures are growing stronger as computers increase in speed while decreasing in cost. High-speed networks continue to expand and become more available. Flexible programs should focus on delivery strategies that help solve the capacity constraints of traditional educational methods, economic concerns, and students' needs.
- **Lack of distinction between distance and traditional learning programs** – Universities continue to enhance more and more courses with digital support. Support for various media in classrooms provides increasing opportunities for students to work independently. Students have more tools than ever to support independent learning. As a result, blended learning has become common. It is sometimes difficult to distinguish between a "distance learning" student and a "classroom" student.
- **Internet is dominant among distance-learning media** – Flexible learning programs have existed for years, but today's learning programs have shifted toward network-based technologies with the Internet as the dominant delivery vehicle. Continuing education continues to use other delivery methodologies such as interactive video and correspondence, but Internet use in course delivery is expanding at a rate considered to be about 40% each year.
- **More e-Learning** – The demand for distance learning continues to expand, with an annual market now reaching into the billions of dollars. Distributed learning programs are currently offered in more than one-half of US universities. The University of Phoenix is an openly traded corporation in the US that leads the marketplace. The University of Phoenix has recently added a university college division to expand the general education undergraduate market. The demand also is growing internationally. The UK's Open University continues to lead the world in distance education programs.

The growth of these flexible programs is being driven by increased access to more students, expanded capabilities for capacity, and emerging markets. Universities offering distance education are perceived as modern and technically competent providing a competitive advantage in recruiting new students.

- **Enrollment Trends** – University enrollment continues to grow in Saudi Arabia, with state universities not able to keep up with the needs. There are few opportunities for female students, and programs are urgently needed that segregate female students in specific learning groups. Also there is an increased need for university programs that assist nontraditional students to advance in their careers and community. Flexible learning programs may help provide the solution for these growing enrollments.
- **Flexibility** – Many more students need programs that can accommodate responsibilities such as full-time jobs and family. Students will shop for universities that provide this programming, and they may be willing to pay premium tuition for this flexibility. To meet the increased demand, education is becoming a commodity. Students are becoming consumers looking to the best value.
- **Learner profiles** – Contemporary learners are different from past generations. They are interested in small modules and short programs. Learning at home and at work is becoming very attractive. Multitasking is becoming a way of life, and there is a need to stay connected in the community. Modern literacy includes not only text content, but also visual activities that involve navigating and assembling knowledge from fragments and pieces. Learners tend to be practical problem solvers. Their life experiences make them autonomous, self-directed, and goal-oriented.
- **Females and expatriates** – Higher percentages of females are in the workplace. This trend, in turn, will lead for increasing demands in education. Millions of expatriates also are working in the KSA. Though Saudization will put the emphasis on jobs for Saudi nationals, large numbers of expatriates will doubtless remain in the Kingdom who are in need of various training programs.
- **Faculty roles shifting** – Universities are increasingly creating a division of labor among faculty activities. For example, a full-time faculty member might provide course lectures, while a student assistant grades papers under the faculty member's guidance. This can provide the opportunity for creating new kinds of instructional staff or administrators with specialized functions. These may be instructional support personnel or staff with specialized background geared to deliver short courses that meet particular community needs.

- **Pedagogy is changing** – Along with becoming more learner-centered, instruction is becoming non-linear and self-directed. This pedagogical change is moving from a transmission model to constructivist and metacognitive models. Computer-enabled communication tends to emphasize the student’s personal accountability of learning. This moves the focus to the student as a consumer and gives the institution flexibility and global reach. It can also mean increased accessibility for those who are disabled.
- **Shift in academic emphasis** – Education is shifting from an emphasis on theory to outcomes- or employer-based approaches. This sometimes makes certification preferable to a degree. Employers place emphasis on knowledge, performance, and skills. Educational programs, therefore, integrate application or on-the-job experience with academic programs. With emphasis on competency, course content is dictated by what learners need, more than by traditional content.
- **Increase in higher education outsourcing and partnerships** – Universities are moving toward increased cooperation and partnerships with other institutions. These partnerships can support the sharing of technology and the delivery of courses. Teaming and outsourcing will play a major role, particularly in the delivery of core courses across universities. An increased amount of contracted programs are being created by third parties and delivered through universities.

C. DEVELOPMENT OF CERTIFICATE PROGRAMS

The development of certificate programs provides an opportunity for CE to establish a reputation for quality as it delivers structured programs to support various professional fields. The reputation of the university can be built on the success of those awarded certificates. Such certificate programs can also be excellent marketing tools to provide a learning program that can be marketed throughout the Kingdom.

Recommendations regarding specific certificate programs that the PMU might offer are found in Section V.E.1, English Language Institute Program (ELI), and Section V.E.2, e-Learning Center, of this report, though the DRDCE should continue to explore areas for developing additional certificate programs.

It is recommended that certificate development follows the steps below. These steps outline a process developed by the Learning Resource Network (LERN), a major US support organization for continuing education [<http://www.lern.com/>]. PMU may obtain reference materials from LERN if additional support is necessary. Detailed manuals are available from LERN’s Successful Certificate Programs.

Step 1 - Choose Audience/Job

- Situational review
 - Look a current population base who could be customers
 - Look at the strength of the current PMU faculty
 - Analyze the need for the proposed program
 - Examine how other schools are serving the population
- Important questions
 - Will the certificate be viable for more than three years?
 - Can program generate substantial revenue?
 - Is a 50% operating margin feasible by year three?
 - Are contact lists available for 1000+ potential students?
- Development
 - Brainstorm
 - Research
 - Analyze competition
 - Narrow options
 - Final selection

Step 2 - Identify critical skill and knowledge areas

- Brainstorm target job activities
- Identify critical job activities
- Examine which 30 to 30 activities are unique to the job
- Write one to three competencies for each activity, including knowledge skills
- Develop a program outline
 - Activity areas
 - Competencies
 - Knowledge skills for competencies

Step 3 - Build Curriculum

- Determine unit focus
 - Each unit has related ideas
 - Units are linked together
 - Learning objective(s) exits for each unit
- Create pre-test for unit
- Create outcomes test

Step 4 - Develop materials

- Select readings
- Create study guide
- Create final exam
- Create presentation

Step 5 - Recruit students

- Use advisory board support
- Refined mailing list
- Create Web page
- Create list of frequently asked questions (FAQs)
- Track progress of students

Step 6 - Recognition

- Certificates
- Press release and letters of recognition
- Pictures
- Completion pins, ribbons, or cards
- Student transcripts and records

D. ADMINISTRATIVE SYSTEM SUPPORT

In the early years of PMU's continuing education efforts, general administrative support should be built around a stand-alone administrative software package that supports management operations, marketing, finance, planning, technology, certificate programs, general processing, and student, instructor, and course information. The technology should be managed by the university IT department, which should be involved in the selection of the vendor for the package selected. General features of the software should include:

- Multiple input points for entry of data
- User-definable fields/validation
- Flexible query system
- Comprehensive data identifier codes
- Contract service support/guaranteed updates
- Scalability
- Modifiable general reports including receipts, invoices, rosters, mailing labels, transcripts, and catalogs

- Accounting and budgeting capabilities
- Word processing and mail merge
- Web course information/registration
- Course and room scheduling
- Marketing and prospect tracking

These features are available from a number of software companies specializing in continuing education management systems. Among these companies are ACEware [<http://www.aceware.com/>] and EduTrax. [<http://www.engsoft.com/edutrax.html>].

By selecting one of these major companies, the DRDCE can achieve an almost turn-key system that can be utilized immediately upon installation.

As the DRDCE and the university grow, it is recommended that the university purchase a continuing education module developed for the university's comprehensive management information system. Among the companies providing these larger management software systems are Banner and PeopleSoft. Continuing education programs that offer credit courses would be supported immediately by the main campus administrative systems.

E. OPERATIONAL UNITS

At the time of start up, the operational units in the DRDCE's continuing education program will be the English Language Institute, the e-Learning Center, and the Continuing Education Center. The size and number of operational units within continuing education will grow based on the enrollments in each of the professional areas. The staffing at start up and the subsequent growth of each division is described in detail in section III.C.1., Personnel, of this report.

The English Language Institute (ELI) is described in substantial detail in (Section V.E.1, English Language Institute Program (ELI), of this report in order to facilitate its immediate start-up. Establishing the ELI right away as the division's first CE unit can serve two functions – to provide needed English-language instruction to the community, and to serve as a model for the initiation of other continuing education units at the PMU. The ELI will need limited support outside its own structure, and it has a great potential for enrollment growth.

The e-Learning Center will be established based on contracted online courses. It can be started with minimal support from the unit's webmaster.

The Continuing Education Center will oversee all non-ELI and non-e-Learning courses that will be developed under the direction of the division's advisory committees and the university's academic departments. As programs grow, this unit should be divided into operational subsets with coordinators over programs.

As Continuing Education grows, the management component along with the Executive MBA should be split into separate units to provide more focus on the EMBA. This should occur around Year Four when the Executive MBA program is expected to begin (as described in the report PMU Implementation Plan) or soon thereafter.

1. English Language Institute Program (ELI)

a. Introduction

The English Language Institute (ELI) is presented as a component of the DRDCE that can be used as a blueprint for other programs. The DRDCE can use the ELI as a test case to demonstrate how such a program can be self-supporting, serve the needs of the community in a cooperative manner, operate with significant flexibility, and maintain rigorous academic standards.

Implementing the ELI in such a manner is made possible by the program's following advantages:

- This small, stand-alone operation can accomplish the community outreach mission of the PMU through connection with both the general community and the business community in the region surrounding the university.
- The ELI can be implemented almost immediately, as it will utilize existing faculty from the PMU Preparation Year Program and will locate its programs in existing PMU classrooms or off-site at the students' location.

b. Overview

The ELI will be a component of the DRDCE's continuing education functions that is designed to provide instruction and training in English communication to non-traditional adult students in a variety of career specialties. The institute is a response to a number of changing economic forces and business practices:

- Companies are asking for English courses that directly address the needs of their current or potential employees. Both small private businesses and multinational corporations require their employees to communicate in English in both general professional and technical language.

- Adults wishing to advance in their careers or enhance their performance seek to acquire the English communication skills related to their occupation or professional tasks. In many cases, employers will sponsor employees, allowing them to take courses on or off-site during business hours. Some employers provide incentives and rewards for such professional development after business hours.
- A very strong need exists in the KSA for high quality education of English teachers in the schools. As the population expands and the need for English instruction increases throughout the schools, cost effective and efficient training of teachers will imperative.

Continuing education programs, as compared to degree programs, are particularly appealing for a number of reasons. Business employees needing to improve their professional qualifications, persons wanting to enter or re-enter the workforce, or adults wishing a gradual return to an academic program will be encouraged by the flexibility and variety of course offerings in a continuing education program.

The ELI program recommended for the DRDCE will offer courses for three constituencies:

- English Communication for Business People and Other Professionals
- General English Communication Skills
- English Teacher Training and Certification

Both collaborative learning and individual instruction will characterize the ELI. The communicative competency model will constitute the theoretical framework of language learning and learning outcomes.

The English Teacher Training program will conform to standards for the TEFL (Teaching English as a Foreign Language) Certificate. The English Teacher Certification program will conform to Teacher of English to Speakers of Other Languages (TESOL) and National Council for Accreditation of Teacher Education (NCATE) standards for the Accreditation of Initial Programs in P-12 English as a Second Language (ESL) Teacher Education.

c. Advisory Committees

As with all the operational units of the DRDCE, the ELI will have advisory board support and guidance for its operations.

The ELI's External Advisory Board will include individuals from the business and education communities who are identified and invited by the local Chamber of Commerce and the local high-schools. These individuals will be selected based on their community involvement and business interests in the success of ELI.

The ELI Internal Advisory Board will include representatives from the following PMU Programs: Preparation Year Program (both administration and English-language faculty), College of Business Administration, Division of Student Services, and Learning Resources Center. The Internal Advisory Board will ensure that policies and programs of the ELI are in harmony with these other entities, that redundancies are avoided, and that expertise is shared for maximum benefit of all concerned.

d. Program Definition

(1) Purpose

The ELI will be founded on collaboration between the academic and business communities in order to provide highly qualified graduates for employment.

As a continuing education unit, the ELI will be designed to develop the intellectual capital and potential of non-traditional students.

The courses offered through the ELI will aim to fulfill students' and employers' needs in the shortest possible time by identifying the most appropriate content, teaching methods, and practical applications.

ELI programs will be delivered as a commercially operated service that is funded by tuition and revenues generated through services to commercial entities.

(2) Vision

The English Language Institute will provide training programs to meet the community's unique educational, social, and cultural needs for oral and written communication in English.

The ELI will contribute to the community by enhancing people's occupational and professional performance. The result will be to improve their career options and quality of life. Students will be motivated to develop their full potential through access to learning opportunities that are flexible, interesting, and useful. Accurate placement testing, monitoring, and guidance will help ensure students' success. By working collaboratively, students will become more self-reliant and empowered learners.

Furthermore, as active participants in a stimulating learning environment that adjusts to their individual priorities and learning styles, students and their sponsors will respond as satisfied consumers of a quality program.

(3) Mission

The mission of the English Language Institute will be four-fold:

- To provide a variety of courses to meet the specialized and actual requirements and practices of the surrounding businesses.
- To meet the professional, academic, and personal needs of non-traditional students for English communication skills.
- To meet the needs of public schools for the training and certification of English language teachers.
- To provide a summer course for students who are one level of instruction away from completing the PMU Preparation Year in order to enable them to enter the university in Fall (For a full discussion of the Preparation Year Program's levels of English language instruction, see the report Preparation Program Design).

e. Overview of Program Components

(1) Needs Analysis

It is strongly recommended that the academic programs proposed in this report be modified based on a SWOT analysis conducted well ahead of program startup. The SWOT analysis, which examines an program or organization's strengths (S), weaknesses (W), opportunities (O), and threats (T), is explained in Section III.A.3, Needs Assessment / SWOT Analysis, of this report.

This analysis should involve ELI internal and external committees and should include interviews with or questionnaires distributed to advisory board members, in-company course coordinators, future students' managers,

and potential students. The procedure developed for the analysis and the contacts made during the process will enable program directors to maintain a channel of communication with all stakeholders and to make needed adjustments in the program in an efficient and timely manner. The ongoing dialog with stakeholders will promote realistic expectations for all concerned.

(2) Academic Aspects of the ELI Program

The ELI is expected to have the following catalog of courses that deliver the skills and training needed in four programs:

- General English Communication
- Professional English Communication for Business
- English Teacher Training
- English Teacher Certification

(3) Program characteristics

The levels and sequence of courses will offer maximum flexibility in order to enable students to transition from one program to another, and from one skill level to another. Each course will be divided into individual modules in order to afford working professionals the flexibility to take one module only. Depending on the student's skills, he or she may select individual modules at various skill levels, and in different programs.

For example, teachers in the ETC program will be able to pick the modules that complement their level of proficiency in particular skill areas. Students in the General English sequence may enter the advanced level, where they will have several choices in listening/speaking and reading/writing in the General English or Professional English sequence.

(4) Hours of Instruction

Each course will be divided into three consecutive modules; one module represents 40 hours of instruction and runs for one month assuming 2 hours of instruction on 5 days per week. Consequently each course consists of 120 hours of instruction and testing.

(5) Instructional Formats

Except for beginning English, each module will comprise a combination of seminar, workshop and lab or off-site instruction.

(6) Instructional Responsibilities of Faculty and Instructors

Faculty will be responsible for teaching the seminar (30 hours) and for supervising the workshop or practicum, which may be conducted by an instructor (10 hours). Seminars will cover new material, and provide demonstrations, guidelines, and assessment.

Workshops conducted by instructors will consist of discussions and review of material covered in the seminar, skill building, proficiency training, role-play, and individual tutorials.

The instructor also will be responsible for mediating the lab assignments, which the student completes using computer software.

- PureVoice is recommended for oral assignments (<http://www.cdmatech.com/solutions/products/purevoic e.jsp>)
- Daedalus is recommended for writing assignments, <http://www.daedalus.com/contact.asp>)
- Other CD-ROM applications may be selected.

(7) Class size

The maximum class size for the seminar is 14. The 14 students are then assigned to workshop groups based on skill-level, scheduling preferences, and gender.

(8) Location of instruction:

It may be possible that students travel to the PMU campus only on 15 days per month; while the smaller workshops are conducted at the job site, at local high schools, or in rented buildings in the city. Lab assignments may be completed on line at home.

(9) Accommodating Gender Separation:

To allow for separation of the genders seminars will be offered both live with gender appropriate instructors and via videoconferencing or closed-circuit TV. When workshops are offered on a job site or at a local high school, gender separation will occur within the framework of those institutions. Girls' high schools and boys' high schools are by definition already separated.

f. Admissions Criteria

Admission will be based on open enrollment with the exception of the programs for teachers.

- Students entering Professional English Communication (PEC) and General English Communication (GEC) will hold a high school diploma or its equivalent and may select courses based on a placement test.
- Students entering the English Teacher Training (ETT) short program must possess an advanced level of English proficiency
- Students entering English Teacher Certification (ETC) professional program must possess a bachelor's degree and required teaching qualifications of the KSA.
- Students in the PMU Preparation Year Program who elect to transfer to the ELI to pursue teacher training rather than enter degree studies at the university must have successfully completed Level 6 of the program's English language instruction. (For a full discussion of the Preparation Year Program's levels of English language instruction, see the report Preparation Program Design).

The measure of English proficiency that qualifies as "advanced" will be determined by the ELI faculty and administrators and will be based on student performance on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) test.

The ELI Administrative Coordinator will provide appropriate forms and record-keeping mechanisms to distribute and collect student applications materials. These materials would include, but not be limited to, online registration, mail-in registration, and paperwork related to placement testing.

g. Teaching Methods and Approaches

Given the inclusive philosophy of the ELI program, students will vary widely in terms of previous schooling, language aptitude, motivation, and learning styles. Consequently, ELI instructors will use an array of methods designed to help adult students learn. The collaborative and service approach of the ELI program will be extended to the classroom so that learners understand the nature of language acquisition and their own learning styles, motivations, and personalities.

Instruction the ELI will adhere to the tenets of communicative competency as described in the seminal work of Canale and Swain (1980), and Bachman (1987). The characteristics of this method represent a radical departure from traditional methods such as the audio-lingual and grammar-translation. In communicative language teaching, the emphasis is on the use of real-world materials that are not simplified for student use, the development of fluency, and the ability to convey a message accurately by using a combination of skills and strategies.

For a full discussion of this method, see the following papers:

- Canale, Michael, and Swain, Merrill. 1980. Theoretical Bases of Communicative Approaches to Second Language Teaching and Testing. *Applied Linguistics* 1:1-47.
- Bachman, Lyle F. 1987. The TOEFL as a Measure of Communicative Competence. Paper delivered at the Second TOEFL Invitational Conference, Educational Testing Service, Princeton, NJ

h. Credit and Non-Credit Bearing Courses

Courses in the English Teaching Certification (ETC) program will be credit-bearing in view of potential future accreditation by international organizations. The ETC program therefore will conform to the ESL teacher certification standards of TESOL and the American Council on the Teaching of Foreign Languages (ACTFL).

Students in the three other programs may opt for official recognition of their English language skills by taking standardized tests such as TOEFL or IELTS.

i. Administrative Aspects of the ELI Program

(1) Relationships between ELI and PMU units

The Supervisor of the English Language Institute will report to the Director of the DRDCE.

The ELI will work closely with other components of the PMU on a number of matters:

- The ELI and the PMU Professional Development Center will share expertise on pedagogical and professional issues; to assess faculty qualifications; and to consult with faculty on teaching problems; classroom management, assessment skills, and instructional technology.

- A representative from the Professional Development Center will sit on a panel that will assess students as part of the exit requirements of the English Teacher Certification program.
- The Supervisor of the ELI will consult with the Professional Development Center and the administration of the PMU Preparation Year Program on the eligibility of students who wish to transfer to the ELI instead of entering degree programs or who wish to leave degree studies to enter the ELI.

(2) Administrative Staffing

Achieving flexibility in course offerings, selection, and scheduling will require a well-run system of administration, testing, and recordkeeping. The administrative staff of the ELI can grow gradually with the size of the program. If the staff is small at opening, individuals may be required to perform multiple duties. At full operation, the staff should include the following persons:

- ELI Academic Coordinator: Develops courses, trains and supervises instructors, organizes and designs entry and exit assessments, deals with academic issues on a daily basis, keeps abreast of current research and instructional technology
- ELI Administrative Coordinator: Schedules classes, organizes instructional facilities, manages student registration and records, handles faculty and staff appointments.
- ELI Office Manager: Maintains files, handles telephone and e-mail correspondence, orders textbooks, oversees supplies and office equipment, provides assistance to the Academic Coordinator, Administrative Coordinator and faculty as needed.

Complete position descriptions for these staff members are provided in Appendix A, DRDCE Staff Position Descriptions.

(3) Source, Qualifications, and Responsibilities of Faculty

ELI faculty will be recruited from among the Preparation Year Program's ESL teachers. Each must possess an M.A. degree or equivalent in Teaching English as a Foreign/Second Language (TEFL/TESL), applied linguistics, foreign-language pedagogy, or a related field as well as two years of teaching experience, preferably in a communicative-centered program at an accredited institution of higher learning.

Faculty will have native-speaker proficiency in English, demonstrated either through being a native of an English-speaking country or by a score of 8.5 or above on IELTS or an equivalent score on TOEFL.

Faculty teaching in the ELI component will have primary responsibility for these courses, including planning and coordination, maintenance of academic standards, record-keeping, monitoring student progress, and holding office hours.

Work schedules of faculty will be carefully coordinated between the EFI and the Preparation Year Program to ensure that no faculty member is overburdened by the teaching load. The PMU may release faculty from a portion of their Preparation Year Program teaching to teach in the EFI if the university determines this is a valuable use of their time.

j. Marketing ELI

Marketing policies and strategies will be devised by internal and external advisory committees with input from business and secondary school administrators. ELI might contract, for example, with local schools to provide in-service training and workshops for foreign language teachers. In exchange, student teachers in the ETC and ETT programs can conduct observations and student teaching in those same schools.

ELI also could offer specialized short programs to area businesses;. Examples might include reading technical directions, writing technical reports, telephone skills, conducting meetings.

k. Teaching Facilities

Enabled by the availability of English-language faculty in the PMU Preparation Year Program, ELI will be one of the first programs offered by the DRDCE. Even if the program is offered within the first two years of the university, however, it should find ample space on campus. Two buildings, housing the Preparation Year Program and the Core Curriculum, will be complete, and the university will be enrolling reduced size classes.

By the time the university is admitting full-size entering classes, it will have completed all of its college buildings (For a discussion of space availability on the PMU campus, see the November 19, 2004 memo PMU Academic Space Program.) Some of the university's classrooms certainly will be available

for use by the ELI or other DRDCE functions. However, once the PMU is in full operation, classrooms on campus may be available only in the evening and on weekends. The ELI, therefore, will need to look to other locations for conducting its classes.

Additionally, the nature of the ELI mission to reach the community and programs that mix large group seminars, smaller workshops, and off-site service, will require a flexible and varied approach to facilities.

PMU classes will be an ideal location for a certain number of courses. With the university's pervasive use of technology and smart classroom technology (see the reports Information Technology Strategy and PMU Infrastructure Specifications) the campus will be an ideal base for distance learning programs that reach students elsewhere.

Other viable locations for ELI classes would include:

- The Chamber of Commerce training center in Al-Khobar, with closed-circuit TV or video conferencing facilities that allow for separate classes for men and women.
- Job-site facilities for workshops conducted business offices
- Facilities at secondary schools for teacher training courses (including practice teaching, videotaping, and classroom observation)

1. Partnerships

ELI partnerships with local business, community leaders, and entities within the PMU community are a principal part of the advisory committee roles. The ELI will seek support, guidance and services from each of these sources as follows:

- Chamber of Commerce (for networking with businesses, resources for curriculum, needs analysis, training materials, guest speakers, and field-specific assignments)
- Local secondary schools (for classroom observations, practice teaching, videotaping, and mentoring)
- PMU e-Learning Center (for assistance with videoconferencing procedures and facilities, language labs, course software design and implementation)
- PMU Student Support Services (for staff and materials to support courses)
- PMU Teaching Development Center (for enhancing the training of English teachers) PMU Preparation Year Program (for supplying and supporting ELI faculty)

m. Programs

The ELI will offer four programs to meet the needs of a wide range of students.

(1) General English Communication (GEC)

The GEC Program will be designed for a wide range of students, such as those wishing to begin studying English, those who wish to advance particular skills in reading and writing or listening and speaking, and those who wish to perfect their general communication skills in English.

(a) Program description

GEC will offer a series of courses that can be selected based on an individual's standardized test scores, results of placement tests, and (for PMU transfer students) level of English skill achieved in the PMU Preparation Year Program. Courses will be offered at three levels: Beginning, Intermediate, and Advanced.

Beginning level courses will focus on general English communication skills and on integrating the four skills of listening, speaking, reading, and writing.

Intermediate level courses will focus on combining listening with speaking and reading with writing.

Advanced level course will be geared toward academic and professional contexts. A TOEFL preparation course will be part of the Advanced level.

(b) Admission and Exit Criteria

GEC is open to any individual who has earned a high-school diploma or who has received an equivalent educational background.

Upon successfully completing various modules of the program, the student will receive a certificate indicating his or her level of achievement. Criteria for successful completion include 80% attendance at seminars and workshops, 90% completion of assignments, rated "satisfactory" on a four-point scale of unsatisfactory, satisfactory, good, excellent.

(2) Professional English Communication (PEC)

This program will be designed for the individual in a business, manufacturing, or engineering occupation who has a basic command of English but who needs to increase his or her proficiency in speaking and/or writing in a technical area.

(a) Program Description

PEC courses belong at the intermediate and advanced levels of English proficiency.

- General Business English will consist of three modules offered at the intermediate level. This course will be designed for those who want to acquire oral and written communication skills for everyday business practices such as meetings, presentations, telephoning, reading instructions, and writing brief reports.
- Speaking Business English will be offered at the advanced level and will focus on developing sophisticated communication skills for formal presentations, leading discussions, negotiating, and persuading.
- Writing Business English will be offered at the advanced level and will focus on writing reports, project analyses, memoranda, job descriptions, product specifications, and other professional tasks.

(b) Admission and Exit Criteria

Admission to PEC courses is based on one of the following:

- Completion of the third module of any course at the intermediate level
- Test scores, with a recommended TOEFL of 450
- Results of placement tests
- Completion of PRPC 0041: High-Intermediate Communication Skills in the PMU in the Preparation Year Program, for students wishing to transfer to the workforce rather than enter the university.

Students successfully completing the courses in the PEC program will receive documentation attesting to their achievement.

(3) English Teacher Training Programs

Individuals who wish to pursue a career teaching English to speakers of Arabic can choose from two training options.

- English Teaching Certificate (ETC) - a lengthy (approximately 200 hours), academically rigorous option. ETC is an expanded in-service program for current secondary school teachers who wish to earn ESL/ EFL qualifications as an endorsement or add-on certification.
- English Teacher Training (ETT) - a shorter-term (140 hours) pre-service program for individuals who have advanced proficiency in English and who need practical training in teaching ESL/EFL.

▪ (a) Program Objectives

These programs are intended to respond to the KSA's stated need for trained secondary teachers of English as a foreign language. ETT and ETC will provide training that conforms to the needs and expectations of local secondary school administration and interested students.

Of paramount importance will be that these programs meet high academic standards and produce graduates with respectable academic credentials. It is therefore recommended that the ETC program seek accreditation for the training and certification of ESL/EFL teachers. Certification standards consist of linguistic, pedagogical and practical training. Coursework to meet these standards will include the following:

- Understanding the foreign and second language acquisition process
- selecting and designing materials and activities in line with the L1 and L2 process
- Mastering an array of teaching methods appropriate for a variety of learners, learning styles, and learner motivations
- Familiarization with the demands and procedures of the school environment through structured observations
- Practice teaching and mentoring.

These guidelines above are drawn from standards published and endorsed by the two major professional international organizations:

- TESOL/NCATE Standards for the Accreditation of Initial Programs in P-12 ESL Teacher Education (2002 by Teachers of English to Speakers of Other Languages, Inc. (TESOL))
- ACTFL Program Standards for The Preparation of Foreign Language Teachers (American Council on the Teaching of Foreign Languages). Additional standards, from the ACTFL 2002 Requirements for Programs of Foreign Language Teacher Preparation, include the following components and characteristics:
 - The development of candidates' foreign language proficiency in all areas of communication, with special emphasis on developing oral proficiency, in all language courses.

- An ongoing assessment of candidates' oral proficiency and provision of diagnostic feedback to candidates concerning their progress in meeting required levels of proficiency.
- Language, linguistics, culture, and literature components.
- A methods course that deals specifically with the teaching of foreign languages and that is taught by a qualified faculty member whose expertise is foreign language education and who is knowledgeable about current instructional approaches and issues.
- Field experiences prior to student teaching that include experiences in foreign language classrooms.
- Field experiences, including student teaching, that are supervised by a qualified foreign language educator who is knowledgeable about current instructional approaches and issues in the field of foreign language education.
- Opportunities for candidates to experience technology-enhanced instruction and to use technology in their own teaching.
- Opportunities for candidates to participate in a structured study abroad program and /or intensive immersion experience in a target language community.

Guidelines for the ETT program are based on The University of Cambridge CELTA and Trinity College London short-term certificate programs.

(b) Entrance requirements for English Teacher Certification (ETC) Program

Applicants should be certified secondary school teachers possessing a Baccalaureate degree.

The following standardized test scores are recommended:

- IELTS: 6.5
 - TOEFL: 570
- or
- Academic credentials plus oral interview with lead teacher
 - Completion of Level 6 in ESL courses of the PMU Preparation Year Program
 - TOEFL Writing: Level 4

(c) Exit requirements for English Teacher Certification (ETC) Program

Certification standards and records will be coordinated with and approved by the Arab Society for Human Resources Development. Standards also will be coordinated with KSA organizations that train and certify Saudi teachers.

The program will apply international affiliations' ESL Teacher Certification standards (TESOL, TEFL), and Cambridge (CELTA).

In addition, the following will be required:

- Attendance: 80%
- Grade point average on coursework: 3.0/5.0
- Demonstrated teaching skills (live or videotaped) reviewed by panel consisting of faculty from the ELI program, PMU Preparation Year Program, PMU Professional Development Center, and local secondary school faculty and administrations.

Standards will follow ACTFL Program Standards, and TESOL/NCATE Standards for the Accreditation of Initial Programs in P-12 ESL Teacher Preparation.

(d) Entrance requirements for English Teacher Training (ETT) Program

The following levels of achievement will be required:

- High school diploma
- Advanced level of English proficiency in all four skill areas: reading, writing, speaking, and listening
- Proof of residence and/or education in an English-speaking country

(e) Exit requirements for English Teacher Training (ETT) Program

The following will be required:

- Attendance: 80%
- Grade point average on coursework: 3.0/4.0
- Demonstrated teaching skills (live or videotaped) reviewed by course instructors. Standards follow those of the TEFL Certificate Course or the Cambridge CELTA program.

n. Overview of ETC and ETT Programs

The following table is presented to provide a quick summary of the programs in the ELI.

English Teaching Certificate (ETC)	English Teacher Training (ETT)
<p><u>Target Student</u> Elementary or secondary school teacher who wishes to add-on ESL/EFL certification to his or her existing teaching qualifications</p>	<p><u>Target Student</u> Individual with at least a high-school diploma and an advanced level of English proficiency who wishes to receive initial teacher training in the field of ESL/EFL. This is an option for those who completed the GES program.</p>
<p><u>Entrance Requirements</u> Baccalaureate degree Intermediate level of English proficiency in all four skill areas Valid teaching certificate from the Kingdom of Saudi Arabia</p>	<p><u>Entrance Requirements</u> High-school diploma Advanced level of English proficiency in all four skill areas Proof of residence and/or education in an English-speaking country</p>
<p><u>Program length</u> 200 hours (approx.) + 10 hours supervised practice teaching</p>	<p><u>Program length</u> 120 hours + 20 hours supervised practice teaching</p>
<p><u>Required Coursework</u> Applied linguistics (phonology, syntax, semantics, contrastive analysis): 40 hours Methods in teaching EFL and language acquisition theory: 40 hours Selecting and designing instructional materials (including technology) 40 hours</p>	<p><u>Required Coursework</u> Applied linguistics ((phonology, syntax, semantics, contrastive analysis): 40 hours Methods in teaching EFL and language acquisition theory: 40 hours Selecting and designing instructional materials (including technology) 40 hours</p>
<p><u>Proficiency Development</u> Candidates must reach the advanced level of proficiency in at least three or the four skill areas. To reach this standard, candidates may select courses in GES, PEC, or TOEFL preparation sequences. Candidates may also test out of this requirement. 40-80 hours</p>	
<p><u>Cultural Studies (30 hours)</u></p>	
<p><u>Field Experience (10 hours)</u> Observation and analysis of model teaching Supervised practice teaching</p>	<p><u>Field Experience (20 hours)</u> Observation and analysis of model teaching Supervised practice teaching</p>

o. Scheduling Teacher Programs to Reach the Market

ELI programs will be offered year round, with the sequence of courses in both the ETC and ETT programs beginning in summer to enable secondary school teachers to attend classes.

Although the PMU will have no College of Education to offer skills such as linguistics, pedagogy, methods, and culture, the university is ideally positioned to offer English language training to teachers throughout the Kingdom. The fact that ELI courses will meet TESOL and ACTFL standards will provide the level of academic validity associated with a College of Education program. This should make ELI a very marketable program.

p. Options for PMU students

Students who complete Level 5 of the English language requirements in the Preparation Year Program will lack only one six-week course before they can enroll in degree studies in one of the PMU colleges. With no summer school planned for the university and no option to enter degree studies in January, these students would have to wait an entire to enter the university.

ELI will offer these students the option of a summertime English language course that will enable them to achieve Level 6 proficiency and be granted admission to university degree studies in September.

Students finishing the PMU Preparation Year Program at the end of the Spring semester and electing to enter a career in teaching rather than pursuing a degree at the university may be admitted to the ETT (short teacher training program) if they take advanced level communication classes in the summer.

Students from the PMU Preparation Year Program who elect to enter the general workforce rather than university degree studies may enroll in the General English Communication (GEC) program or the Professional English Communication (PEC) program.

2. e-Learning Center

e-Learning is new to the Kingdom, but it is receiving more and more attention from universities. Illustrating this interest, the KSA Minister of Higher Education sponsored an e-learning workshop at KFUPM in October 2004. Universities are beginning to develop online courses throughout the Kingdom, and DRDCE can lead the way for PMU in the development of online programs.

a. Staffing and Facilities

The e-Learning Center will provide PMU with the opportunity to begin offering online courses without expending faculty resources to develop or teach them. This can be accomplished by using vendors who will contract with the university to provide curriculum, Web support, and facilitation for online programs.

Initially, the e-Learning Center can be supported by its Supervisor, a webmaster, and university technical staff for sever and network support. Office space in the Learning Resources Center with broadband access for this staff will be the main facilities required for online programs grow rapidly, additional technical support and instruction design staff may be added to the e-Learning Center to develop local programs and possibly to help the university develop online credit courses.

A graphic representation of the recommended schedules for hiring DRDCE staff is presented in Appendix B, DRDCE Staff Hiring Timeline.

b. Contract Online Programs

Contract online training provides a definite opportunity for the PMU to enter the e-Learning market on a fast-track and turn-key basis. Contracting for curriculum development and support is becoming more and more common in continuing education. It has a proven record of success and has produced revenue in many universities throughout the world. There should be no need to associate with a vendor who charges a fee for Web setup. University legal representatives should review any contracts negotiated, but a few elements to include in the written agreement are:

- Non-competition clause
- Time period for the relationship
- Processes for handling money, including specifics on deposits and payments
- Specific listing of services provided by each party of the agreement

The e-Learning Center will offer a variety of online courses contracted from a variety of vendors. Programs recommended in this report are all readily available from vendors in the United States, but other international vendors may also be considered based on review by the Director of the DRDCE and the Supervisor of e-Learning. One vendor that may be used for all of these courses is Gatlin Educational Services (<http://www.gatlineducation.com/>).

The programs and courses recommended for start-up are:

(1) Networking and CompTIA Certification Programs

- Comp TIA A+ is the industry standard for vendor-neutral skills necessary for an entry level computer technician
- CompTIA Cisco CCN Certification training on Internet routers
- CompTIA Linux+/Linux Professional Level One Certification Preparation for the CompTIA Linux+exam
- Net Web Developer Course covering Web development issues and requirements.
- CompTIA Network+/Server+ with N+ validating technical competency in networking administration and support, and S+ validating advanced level technical competency of server technology (including installation, configuration, upgrading, maintenance, troubleshooting and disaster recovery).
- CompTIA Security covering network security issues/requirements

(2) Microsoft Certification Programs

These programs use Microsoft Official Curriculum (MOC) to give students the knowledge for non-credit students for academic education tracks, Microsoft certification exams, or career opportunities as network administrators, technical support specialists, software or hardware developers, and design engineers.

- MCDBA: For professionals who design, implement, and administer Microsoft SQL Server databases.
- MCSA: Enabling professionals to successfully implement, manage, and troubleshoot Microsoft Windows server-based operating systems and systems that contain messaging services, file/print servers, and firewalls.

- MCSA+: A program for those who already hold CompTIA certifications and wish to complete the MCSA training.
- MCSE: Intended for those who also analyze business requirements, design infrastructure, and deploy networks.
- ASP.NET: Enables skills needed to provide a unified Web development model that includes the services necessary to build enterprise-class Web applications.

(3) Internet and Design Programs

The vendor Gatlin Educational Services (<http://www.gatlineducation.com/>) may be used to provide these courses.

- AutoCAD: Powerful software tool, a mainstay of technical offices from architects to government contractors.
- Graphic Design: New software teaches the skills that make a professional designer.
- Help Desk Specialist: Training for technical support jobs.
- Web Database Developer: Skills to utilize and leverage databases on the Internet.
- Webmaster: Plan, design, implement and maintain websites using HTML and Dynamic HTML.

(4) American Management Association Courses

The American Management Association International is the world's largest membership-based training organization, offering programs in communications, finance, leadership, and management. This global not-for-profit, membership-based association provides a full range of management development and educational services to individuals, companies, and government agencies worldwide, including 486 of the Fortune 500 companies. In the U.S. the AMA collaborates successfully with hundreds of community colleges and universities to bring superior management training to local communities. The continuing education division of the DRDCE can partner with the AMA (through vendors such as <http://www.flexstudy.com>) to provide a variety of turn-key online courses via programs in the e-Learning Center:

Certificate in Success Skills in the Workplace

(Students choose five or six courses for a total of 10 CEUs*)

- Presentation Success: How to plan, prepare, and deliver effective presentations
- Interpersonal Negotiations: Breaking down the barriers to interpersonal communication skills in the workplace
- Taking Control with Time Management
- The Grammar and Proofreading Course
- Practical Problem-Solving Skills in the Workplace
- Fundamentals of Business Writing
- Personal Strategies for Managing Stress
- Skills For Success: A guide for secretaries and administrative assistants
- Planning and Leading Productive Meetings
- Business Writing: When English is a second language
- How to Sharpen Your Business Writing Skills
- How to Manage Conflict in the Organization

Certificate in General Management

(Students choose five or six courses for a total of 10 CEUs)

- Presentation Success: How to plan, prepare, and deliver effective presentations
- Gaining Competitive Advantage with Shared Leadership Teams
- Performance Management
- Coaching for Top Performance

**One Course Equivalent Unit (CEU) is equal to ten contact hours of participation under responsible, qualified direction and instruction. Although CEUs have not been identified as widely used through KSA, they are popular units of continuing education measurement in the United States and some other parts of the world. The CEU was created to provide a standard unit of measure, to quantify continuing adult education and training activities, and to serve the diversity of providers, activities, and purposes in adult education. CEUs are also commonly used by individuals to supply an employer or prospective employer with information on continuing education and training experiences and to provide documentation to registration boards, certification boards, or professional organizations.*

The DRDCE may wish to consider the use of CEUs as more and more international markets are developed.

- First Level Leadership: Supervising in the new organization
- Managing and Achieving Organizational Goals
- Fair, Square, and Legal: A manager's guide to safe hiring, managing, and firing practices
- Taking Control with Time Management
- The Grammar and Proofreading Course
- Fundamentals of Business Writing
- First-Line Supervision
- Personal Strategies for Managing Stress
- Leadership Skills for Managers
- What Managers Do Finance and accounting for non-financial managers
- Communication Skills For Managers
- How to Be an Effective Facilitator
- How to Manage Your Priorities
- A Manager's Guide To Human Behavior
- How to Plan and Conduct Productive Performance Appraisals
- Planning and Leading Productive Meetings
- Successful Project Management
- Business Writing: When English is a second language
- Successful Negotiating Fundamentals of Human Resources
- How to Develop the Strategic Plan
- How to Sharpen Your Business Writing Skills
- How to Manage Conflict in the Organization
- Successful Interviewing: Techniques for hiring, coaching, and performance management meetings

Certificate in Strategic Leadership

(Students choose five or six courses for a total of 10 CEUs)

- Gaining Competitive Advantage with Shared Leadership Teams
- Coaching for Top Performance
- First Level Leadership: Supervising in the new organization
- Managing and Achieving Organizational Goals
- Interpersonal Negotiations: Breaking down the barriers
- Leadership Skills for Managers
- Finance and Accounting for Non-financial Managers
- How to Be an Effective Facilitator
- How to Lead a Business Process Improvement Effort
- Strategic Supply Management
- Planning and Leading Productive Meetings
- Successful Project Management
- How to Develop the Strategic Plan
- Mergers and Acquisitions: A strategic valuation approach
- How to Manage Conflict in the Organization

Certificate In Business Communications Management

(Students choose five or six courses for a total of 10 CEUs)

- Presentation Success: How to plan, prepare, and deliver effective Presentations
- Interpersonal Communication Skills in the Workplace
- The Grammar and Proofreading Course
- Fundamentals of Business Writing
- Communication Skills for Managers, Fourth Edition
- How to Be an Effective Facilitator
- Planning and Leading Productive Meetings
- Business Writing: When English is a second language

- How to Sharpen Your Business Writing Skills
- Successful Interviewing: Techniques for hiring, coaching, and performance management meetings

3. Continuing Education Center

Although the term, “Continuing Education,” refers to all of the non-degree courses offered by the division, the Continuing Education Center will be a separate and distinct operating unit of the division. The Continuing Education Center will work with appropriate staff, university faculty, adjunct faculty, and outside contractors and vendors to deliver a variety of professional education and personal development courses open to the general public. The center will coordinate all of the courses not falling under the e-Learning Center and ELI. As the Continuing Education Center matures, it may evolve into a number of specific program areas, the first of which is expected to be the Executive MBA and non-credit management programs.

a. Staffing and Facilities

Because of the nature of continuing education, programs are continually changing with the needs of the community. It will therefore be most effective for the Supervisor of Continuing Education to utilize faculty from other divisions of the university to develop and teach continuing education. Outside vendors may also help in the selection and supervision of part-time staff. It is expected that few if any full time staff will be needed in this area.

Administrative staff must be hired, however, to support the registration of students and to provide general student support functions based on the program’s size. Administrative software should allow one support staff person to register, maintain grads and transcripts, and offer general support for 300-500 enrollments. One accounting person can support up to 1,500 enrollments in general programs. This staffing level should be regularly assessed by the Supervisor of Continuing Educator and the Director of the DRDCE as programs grow.

Space requirements on campus should be adequate in the Learning Resource Center to support the administrative staff of the Continuing Education Center. Flexible scheduling adapted to community needs will enable the use of PMU academic buildings in the evenings and weekends. No specialized apace will be required. The Continuing Education Center also may rent space in high population areas such as Al-Khobar to deliver classes in closer proximity to certain segments of the community.

b. Executive MBA and Management Programs

Management programs, offered either on-line, on the PMU campus, or at client sites, will be determined as the demand arises. A number of options for short courses that may fit into the category of Management Programs are presented below in Section C., Locally Delivered Curriculum and Courses.

The Executive MBA program, on the other hand, has been determined by the PMU Founding Committee as one of the desired degree programs and as one of the defining characteristics of the university. The program is extensively documented, including entrance requirements, faculty qualifications and syllabi for each course to be offered, in the report *Executive MBA Curriculum Design*.

The 45 credit-hour Executive MBA, which is based on and comparable to leading Executive MBA programs in the United States, is designed to be completed in two years with participants attending classes while maintaining their full time employment.

The program will be offered by the PMU College of Business Administration in cooperation with the DRDCE. A major function for the DRDCE will be to provide marketing for the program, as Executive MBA programs are very competitive. The university must deliver its message to executives who have high professional and educational expectations and standards. These working adults are accustomed to professional treatment. Students in an Executive MBA program will therefore expect a level of service beyond the normal experience in higher education.

c. Locally Delivered Curriculum and Courses

(1) Short Courses

Below are recommendations for the first courses to be offered by the Continuing Education Center. These recommendations are based on existing, successful CE courses being provided by other entities in the area. Open enrollment should be available for these courses with only the restriction of gender separation and individual course prerequisites limiting enrollment. Final determination of course offerings will be made in consultation with the Continuing Education Advisory Committee discussed in (Section III.A.2, Operational Advisory Committees, of this report. The final decision will rest with the Supervisor of Continuing Education.

Short courses should normally last about five days over a one-to-two month period, with approximately 40 hours of instruction. Possible courses for immediate delivery are:

- Human Resources Management
- Facilities Management
- Quality Control
- Arabic for Non-Arabic Speakers
- Change Management

To meet growing professional interest in the soft skill areas, the following courses should be offered:

- Personal Communication (high level)
- Business Communication
- Personnel Evaluation
- Leadership
- Team Building
- Effective Meetings
- Critical Thinking
- Problem-solving

These course lists have been developed from initial consultation with educators and community leaders in the Eastern Province. Final decisions on which initial courses should be offered should be made with the advice of the Continuing Education Advisory Committee.

Two additional areas for immediate exploration by this committee are engineering certification courses and human resource development courses. The Saudi engineering council currently is exploring the possibility of certification in the Kingdom. Immediate work with this council therefore should begin to support education for engineering certification.

In the human resources, the Human Resource Development Association (HRDA) is becoming active in the KSA and has a variety of development programs that should be considered. A major source for programs in this area is the Society of Human Resource Management (<http://www.shrm.org/>). Curricula for these courses may be purchased from HRDA for use in the classroom or for online delivery.

- Tips and Tricks of Facilitating
- Getting to Know Each Other
- Setting the Climate
- Personal Awareness
- Values
- Assumptions and Stereotypes
- Communication
- Diversity Issues
- Conflict Resolution
- Team Building

(2) Flexible Scheduling/Locations

For these courses to be successful, they should be offered in flexible formats and convenient locations. Courses should not be offered only on campus and only as part of the regular academic time schedule.

It is important to the mission of continuing education that its programs meet the needs of the community not only in their offerings, but in their time and place. Because the target population is working adults, these courses should be offered in urban areas convenient to the students' workplace. This could include job-site locations or chamber of commerce facilities in the area.

Courses should be offered in the evening hours and on weekends to meet the needs of the community. This will provide the opportunity of utilize university facilities during "off-hours" and provide effective classroom utilization.

d. On-Site Contract Programs

One of the trends in continuing education is to "contract out" program and curriculum development to professional, third party companies. These programs are then delivered through the university. Similar to the recommendation above for the e-Learning Center, it is recommended that the division consider contracting for delivery of such specialized programs as Health Care (see the discussion below) that not part of the regular PMU curriculum.

Reputable companies exist that will provide local classroom delivery of programs on a contracted basis. The international nature of the PMU may provide some logistical challenges, but the university nonetheless should contact these companies and evaluate their services. These companies will provide professional curricula and work with an institution to recruit faculty to deliver programs. The institution provides classroom space and collects the money. It is a turn-key operation for the university.

Although PMU curriculum does not include health care, early advisory committee meetings have identified programs in entry level nursing as being of great need in the KSA. Meeting this need through contracted programs will minimize the amount of staff and faculty needed by the university and will greatly decrease delivery cost. Most companies will offer programs through the university at a negotiated rate that does not even include any start-up cost. Some vendors will even pay for the marketing of programs. The following two programs, Nursing Assistant and Medical Assistant, should be considered.

(1) Certified Nursing Assistant Program

Though PMU will not offer undergraduate majors in health sciences, health care education is a growing area with unmet needs in the Kingdom. Nursing assistants work in a variety of health care settings including hospitals, doctor offices, clinics, outpatient facilities, nursing homes, and similar facilities. With the national increase in health care related services and the national shortage of professional nurses, the need for Nursing Assistants is growing substantially. A comprehensive program in this field will prepare students to become a nursing assistant and to pass the Certified Nursing Assistant examination. This course meets the Omnibus Budget Reconciliation Act (OBRA), a federal requirements in the United States for training long-term care nursing assistants to provide basic care. The course includes nursing theory, skills and clinical practice. This program includes classroom lecture and labs and also includes additional clinical practice to be arranged after course work is completed.

(2) Medical Assistant Administration Program

This course prepares students to function effectively in many of the administrative and clerical positions in the health care industry. Administrative Medical Assistants, Medical Secretary, Medical Records Clerk, and Health Unit Coordinators are positions in great demand. A comprehensive program in this field will cover important background information on anatomy and physiology, medical terminology, insurance billing and coding, medical

ethics, customer service and legal aspects. This program is intended to provide students with a well-rounded introduction to medical administration so that a student can gain the necessary skills required - to either obtain or advance to a health care administration position. Additionally, job interview training and job placement assistance is available.

(3) Contract Company Example

Strong consideration should be given to contracting to one of several international companies that will provide turn-key programs through the university's continuing education unit. This contracting method is the basis for the e-Learning Center, but also can be considered on local classroom programs.

An example of such a company/program can be viewed on the Web at:

<http://condensedcurriculum.com/>

Condensed Curriculum International, Inc. has been partnering with universities involved in the delivery of health or related services pertaining to the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; rehabilitation and health systems management, among others. For more than 10 years, CCI has offers programs such as pharmacy technician, phlebotomy technician, EKG technician, billing and coding clerk, nursing assistant and numerous other programs in an effort to meet the growing national need for health care professionals. Consumer and corporate educational programs are offered through partnering with public institutions.

CCI provides a starting point for locating companies that provide contracted services. The Continuing Education Center staff should research and evaluate the availability of all such services.

VI. APPENDICES

A – DRDC Staff Position Descriptions

B - DRDCE Staff Hiring Timeline