DIRECTIONS: Provide one form with original approval signatures in lines 1 - 4 for each proposed action. Keep this form to one-page in length. Forms and appropriate attachments should be submitted to the Office of Academic Affairs, who will assign a Log Number to each proposal. Additional copies may be required at a later time.

DATE SUBMITTED February 7, 2004

COLLEGE/SCHOOL College of Engineering & School of Public Affairs

DEPARTMENT/PROGRAM No department specific affiliation within either the College of Engineering or the School of Public Affairs.

PROPOSED ACTION (A separate form for each) ADD X DELETE CHANGE

DESCRIPTION (Provide a succinct account of the proposed action. Additional detail may be provided in an attachment. Provide old and new sample programs for curriculum changes.)

The proposal is for a new degree program, Master of Engineering and Public Policy, jointed overseen and administered by the College of Engineering and the School of Public Affairs; see attached proposal.

JUSTIFICATION/REASONS/RESOURCES (Explain the reason for the proposed action. Identify the source of new resources that may be required. Attach additional material if needed.)

See attached proposal

APPROVAL SIGNATURES

1. Department Committee Chair  
2. Department Chair  
3. College/School PCC Chair  
4. Dean  
5. Dean of the Graduate School (if required)  
6. Chair, Senate PCC  
7. Chair of Senate  
8. Vice President for Academic Affairs & Provost

DATE  
1.  
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VPAAP Rev. 2/2/98
Proposal for
Master of Engineering and Public Policy
February 25, 2004
(Modified April 2004 to incorporate clarifications)

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APPENDIX A – Projected Budget FY05 to FY09

APPENDIX B – Sample Existing Course Selections from Engineering and Public Policy

A. PROGRAM RATIONALE, MARKET, EXPECTATIONS

I. Rationale

Engineering curricula prepare students to identify technological solutions to many of the challenges faced by society and to open up new opportunities to increase welfare and quality of life. Typically, limited attention is given in engineering curricula to the ethical, institutional and socio-economic contexts within which engineering solutions may be applied. In contrast, graduates from public policy programs are trained to analyze and assess the ethical, institutional and socio-economic contexts for engineering solutions, but often do so with limited knowledge of the underlying engineering principles and concepts. However, effectively identifying and implementing engineering solutions which affect a society requires understanding of both the engineering potentials and the conditions under which these potentials can be realized in the public, private and non-profit sectors.
The Master’s of Engineering and Public Policy will provide students with the critical training to carry out engineering and policy analyses that inform each other, create synergy between the technical and social realms of problem solving, foster creativity and innovation, and improve practical solutions to some of the most pressing and complex challenges society faces – including, but not limited to, environmental, national security, public health, disaster response, poverty alleviation, and international development challenges. These graduates will be equipped to provide new leadership in engineering and public policy through a program which teaches both the practical and the theoretical skills to achieve national and international impact.

II. Market

There is an increasingly unmet need in the public, private and non-profit sectors for engineers who understand and appreciate the social context of their work, and for policy analysts who have solid footing in the engineering sciences. This need is particularly strong in the National Capital Region with its high concentration of engineering consulting and technology firms, think-tanks, government agencies, and non-profit organizations. Specific examples of organizations from which we expect to attract students, and in which students would find employment, include non-governmental agencies, such as The World Bank, the World Health Organization, Resources for the Future, the World Wildlife Federation, and both the International and the American Red Cross; U.S. government agencies, including the Department of Energy, the Environmental Protection Agency, the Department of Defense, the Department of Transportation, the U.S. Agency for International Development, and the U.S. Army Corps of Engineers; state agencies in Virginia and Maryland, including their Departments of Transportation, and their Departments of the Environment; and private firms, such as Titan Lockheed Martin, Bechtel Engineering, large environmental and infrastructure design engineering firms, and Price-Waterhouse-Coopers.

Nation-wide, only a few programs have both a strong engineering and a strong public policy component, and few achieve meaningful integration of the two. Existing programs in science and technology policy typically concentrate on developing science and technology insights for economists and political scientists. In the case of the Engineering and Public Policy program at Carnegie Mellon University, their programs spanning engineering and public policy are primarily targeted towards Ph.D. students, rather than toward preparing engineers to work in the public policy arena. The Technology and Public Policy program at the Massachusetts Institute of Technology has chosen as its emphasis U.S. manufacturing policy in, for example, the automotive industry, and the aerospace industry, with a business management overlay. Each of these existing programs satisfies its own important objectives, but none fulfills the goals of this proposed program, and none has the key location for public policy studies of the University of Maryland.

The program proposed here is unique in its admissions requirements, in its requirement to increase technical competence in engineering while introducing students to public policy methods of analysis, and in fusing the two through a practice-oriented
research paper (scholarly practicum), a capstone course and cross-disciplinary electives. This Master’s in Engineering and Public Policy program will equip students to become leaders in both development and implementation of engineering policy, whether they envisage their careers to be spent largely within the United States, to extend internationally through the developed world, or to serve the pressing needs of developing nations.

With its prime location in the National Capital Region, its nationally and internationally recognized expertise in engineering and public policy, and its proven track-record of offering innovative curricula on its College Park campus and at various locations in downtown Washington D.C to pre-career and mid-career students as well as to executives, the University of Maryland is in a formidable position to meet market needs. Furthermore, our location provides unrivalled access to opportunities to become knowledgeable – throughout the duration of a student’s program – about engineering and public policy as it is practiced in both the national and international arenas. Preliminary inquiries to potential employers in the Washington DC area of graduates of such a program has provided evidence of the marketability of the graduates of this program. The fact that there is no other program like this in the United States at present suggests that these graduates will be in a very strong position to take advantage of these opportunities, and furthermore, that this program may lead in creation of a new professional career path. While we expect that many of our students will be engineers already in practice, we also have evidence of interest in the program from among our present engineering undergraduate and graduate programs, including the academically outstanding students in the University’s Gemstone and College Park Scholars Programs.

III. Expectations for Program Development

Drawing from the successful experience of the School of Public Affairs, it is expected that during its first years the Master’s of Engineering and Public Policy program will attract students predominantly from the National Capital Region but rapidly will receive national and international attention. The majority of these students are expected to be mid-career students who have engineering degrees, have moved into positions in which they make public policy and investment decisions, yet feel inadequately prepared. A key attraction of the program, especially for these mid-career students, is the emphasis placed on tailoring course selection to provide the engineering depth and the policy studies education to meet their specific career objectives. Many of the courses are already offered as evening classes to accommodate students’ work schedules. In addition, certain courses may be offered either remotely, or at downtown locations to increase convenience for part-time students employed within Washington DC. As the reputation of the program grows, students are expected to include engineers seeking a credential that equips them to move directly into this area of practice. The program is also expected to attract foreign engineers employed by their governments in upper level public policy decision making.
To increase the program’s visibility and attraction to prospective students, it will need to be advertised extensively. Wherever possible, existing channels such as open house events, special guest lectures open to the community, recruiting events, and existing web sites will be used. In addition though, program brochures will have to be developed and spread widely, advertisements will have to be placed in trade journals, and presentations will be needed.

B. PROGRAM MECHANICS

I. Admission, Retention, and Graduation

Candidates for the Master’s of Engineering and Public Policy must (i) have earned or will earn before enrollment in the program a bachelor's degree (BS) in engineering or equivalent from a regionally accredited college or university in the United States or its equivalent in another country, (ii) satisfy the quality standards for admission to the College of Engineering, and (iii) satisfy the quality standards for admission to the School of Public Affairs. The following criteria will be used in combination to evaluate admission:

1. Quality of previous undergraduate and graduate work.
2. Strength of letters of recommendation from persons competent to judge the applicant's probable success in graduate school.
3. Scores on the Graduate Record Examination (GRE).
4. Statement by the applicant of academic career objectives and their relation to the intended program of study.

To remain in the Master’s of Engineering and Public Policy program in good standing, each student is required to maintain a 3.0 grade point average for all graduate courses taken since enrollment in the degree program. This is required both overall, as well as in courses identified as core courses in the student’s program of study. A student whose cumulative grade point average falls below a "B" (3.0) upon or after the completion of nine credit hours of graduate level courses will be automatically placed on academic probation by the Graduate School for the following full semester. A student whose cumulative grade point average falls below a "B" (3.0) average for three consecutive semesters of enrollment will not be permitted to re-enroll and will have his or her admissions status terminated. In addition, a student who fails to make satisfactory progress in meeting some or all programmatic requirements, or who fails to demonstrate the ability to succeed in his or her course of studies or research, may have his or her enrollment terminated.

In order to graduate from the program, students must satisfy the following requirements:
1. The entire course of study undertaken for any master's degree must constitute a unified, coherent program that is approved by the student's advisor and graduate director and meets Graduate School requirements.

2. A minimum of thirty-nine semester hours in courses acceptable for credit towards the graduate degree is required, as spelled out in section II Curriculum, of this document.

3. If the student is inadequately prepared for the required graduate courses, additional courses may be deemed necessary. These courses will not be considered part of the student's approved program of study.

4. Credits to be applied to a student's program for a master's degree cannot have been used to satisfy any other previously earned degrees (see policies governing the applicability of previously taken courses to University of Maryland degrees).

5. The student must complete the program with an average grade of "B" (3.0) in all courses taken for graduate credit since enrollment in the degree program. This is required both overall, as well as in courses identified as core courses in the student’s program of study.

6. With the exception of the six semester hours of graduate level course credits applicable for possible transfer to the master's degree program, all requirements for the master’s degree must be completed within a five-year period.

7. Transfer of credits is discussed under section II 6 below.

Admissions, retention, and graduation decisions will be made by the program co-directors from the College of Engineering and the School of Public Affairs, each appointed by their respective deans, with input, as needed, from faculty within the two colleges. Current experiences in the School of Public Affairs and the College of Engineering with part-time students who already are well-established in their professional careers suggest a very high degree of motivation and focus, and consequently negligible attrition rates.

II. Curriculum

Overview

The proposed program consists of a total of 39 credit hours. These requirements, although exceeding the 30 credit hours typically required for an MS in Engineering, are essential because of the unconventional and innovative nature of this program. The program requires students both to undertake a rigorous introduction to public policy, and to achieve increased technical competence in a field of engineering practice.
The program requires successful completion of the following:

- 4 core courses (12 credit hours) from the School of Public Affairs
- 4 core courses (12 credit hours) from the College of Engineering
- 1 core capstone course (3 credit hours)
- 1 core practice-oriented research project/scholarly practicum (3 credit hours)
- 3 electives (9 credit hours)

Assuming the practice-oriented research paper (scholarly practicum) is carried out during the summer, full-time students can complete the entire program in two years; part-time students, if enrolled for two courses each semester and satisfying their practice-oriented research paper (scholarly practicum) requirement in conjunction with their work assignment, can complete the program within 3 years. Students, with help from their advisors, are responsible for developing in their first semester in the program a complete proposed plan of study for their degree to achieve this.

Requirements

1. **Public Policy**

   Students are required to select the following courses from the School of Public Affairs to comprise a core exposure to public policy issues and practice:

   - PUAF620 - Political Institutions and Leadership
   - PUAF650 - Moral Dimensions of Public Policy
   - PUAF640 - Microeconomics and Policy Analysis

   Plus one of the following:
   - PUAF670 - Finance
   - PUAF711 - Public Management and Leadership

   Proficiency in Quantitative Analysis (PUAF610 or PUAF611), which is part of the regular School of Public Affairs Master’s core curriculum, is typically high among engineers and will be ensured through the selection of applicants or, if necessary, through additional course requirements that will not count towards the 39 credits for completion of the degree. Macroeconomics (PUAF641), the other Public Affairs core course not listed above, may be chosen as an elective, if appropriate to the student’s study and career plans.

2. **Engineering**

   Students are required to complete four engineering courses that achieve increased technical competence and depth in a coherent concentration within engineering of interest to them and relevant to public policy. That area must be supported by existing faculty interest and existing course offerings in the College of Engineering. Those courses will
be selected after consultation with the relevant faculty in the College of Engineering, and with the approval of the student’s advisor. Course selection will balance rigor and flexibility. Areas of depth may include, for example:

- Engineering and Energy and Environmental Policy
- Engineering and Infrastructure and Development Policy
- Engineering and National Security Policy
- Engineering and Biotechnology Policy
- Engineering and Manufacturing Policy
- Engineering and Space Policy

Some illustrations of suitable engineering core courses and associated public policy courses are provided in Appendix A. Other combinations of engineering courses can be developed to meet the specific professional needs of the student, provided they satisfy the goal of increasing technical competence with a coherent focus.

3. **Capstone Course**

The ninth core course is a three credit capstone course that specifically focuses on the engineering-public policy linkage. This course, newly developed to meet the needs of this program, is designed for students who are in their last year of study in the Masters of Engineering and Public Policy. Its purpose will be to integrate coursework by applying it to real or simulated problems developed for this course.

The course will consist of two components. In the first component, students will work through case studies dealing with issues at the interface of engineering and public policy. From these case studies, students will learn about the public policy dimensions of engineering, including, but not limited to economic, institutional and moral dimensions of the problems and problem solutions at hand. Cases will be selected to span program areas covered in the Masters of Engineering and Public Policy, such as energy and environment, transportation, infrastructure and development, national security, biotechnology and manufacturing. Students focusing on these different areas will be required to bring to each case study the diverse set of methods and knowledge available in these areas.

The second component of the course will build on insights generated from the analysis of case studies. As a group, students will develop their own case study of a topic at the interface of engineering and public policy. Topics will be selected by the professor(s) teaching this course and will be announced at the beginning of the semester.

Student performance will be evaluated on the basis of their contributions to class discussions, regular assignments related to existing case studies, and quality of the final report on their case study. That report is expected to be a major analysis of publishable quality. With consent of the faculty, the course may also be opened to other graduate students with relevant work or research experience and interest in the interface of engineering and public policy.
4. **Practice-oriented Research Paper (Scholarly Practicum) and Project Course Requirements**

A defining aspect of this Master’s of Engineering and Public Policy program is its attention to practice. The Washington DC area is rich with industry, government, think-tanks, and non-governmental organizations that work at the intersection of engineering and public policy. The degree therefore requires that the student gain exposure to that practice through a practice-oriented research project (scholarly practicum).

One option, strongly encouraged, is for students to undertake an internship of 400 hours (10 weeks at 40 hrs per week) in an approved agency or organization in which the student will work on issues at the interface of engineering and public policy.

Alternatively, students who are employed while they pursue this program of study, may, with the approval of their program advisor, choose a project carried out as part of their regular employment to satisfy the practice-oriented requirement, provided that project involves work combining engineering and public policy.

In some cases, neither of the previous options may be feasible, and some alternative will be developed that involves a substantial, supervised directed study project.

For all three options, students, with help from their advisors, will develop in their first semester in the program a proposed plan and placement for their practice-oriented research project (scholarly practicum). Students are required to submit written progress/evaluation reports to supervising faculty during the internship, and a substantial, final research and summary report related to the project. This report will count for 3 credits toward their degree.

5. **Electives**

The program requires three additional, approved electives. These electives are intended to customize the program to meet the engineering and public policy interests of each student, and are considered as key and as integral to the student’s program as other courses he or she will take. These courses may be chosen from public policy course offerings, engineering course offerings, or from graduate courses offered elsewhere in the University, for example from the Department of Economics, the Department of Government and Politics, the Department of Agriculture and Resource Economics, the Business School, the Department of Communication, the Committee on Politics, Philosophy, and Public Policy, the School of Journalism, or the College of Health and Human Performance. In addition, students whose interests in public policy are related to government regulation are advised to consider registering for ENES/ENFP 688, which covers Engineering Liability and Government Regulation, as an elective early in their program. Arrangements for independent study may also be made to satisfy one of these elective requirements.
6. **Transferring credits**

The normal regulations of the University regarding transfer credits will be applied. This permits the transfer of up to six approved credit hours toward this degree, provided: they have not been used as credit toward another degree; the student can demonstrate the knowledge contained in the courses remains current; and the coursework is no more than 7 years old by the date of graduation. Each transfer course must be justified separately. Approval will be at the discretion of the program co-directors.

III. **Program Administration**

One faculty member each from the College of Engineering and the School of Public Affairs will function as co-directors of the program. The co-directors will recruit students, make admissions and retention decisions, advise students, help coordinate courses and curricula, hire and guide faculty to develop new cases studies, and engage in fundraising for the program, attend professional conferences to showcase the program, and otherwise raise the visibility of the program, both locally and nationally. The co-directors will draw on the expertise and advice of other relevant faculty from the School of Public Affairs and the College of Engineering as necessary to provide academic direction to the students. All significant program changes will require the approval of the PCC Committees of both colleges, and both deans, as well as the appropriate campus level committees.

C. **Financial Information/Plan**

I. **Enrollment, Resources and Expenditures**

Appendix B presents the expected numbers of students to be admitted to the Masters of Engineering and Public Policy (MEPP) program, their status, and consequent total program size for the first five years. Appendix B also includes information on resources available to administer the program and likely expenditures.

MEPP students will be charged tuition equal to the average of the usual MSPA in-state and out-of-state rates, which are currently 25% higher than the standard graduate tuition rates. Currently projected MSPA tuition rates for FY 2005 are $464 in-state and $876 out-of-state, thus the tuition rate for the MEPP students would be $670/credit hour. Faculty efforts associated with program demands will include: program development, program advising, supervision of students during their “scholarly practicum,” and co-teaching the capstone course. The program will further require steady funding for advertising, course development, record keeping, student recruiting and admissions, etc.

The information contained in the table is conservative both with respect to the number of students we expect and the resources available for the program. For example, we hope for, and expect, more students than Appendix B assumes, thus yielding higher
tuition revenues and bringing us more quickly to and beyond the steady-state situation portrayed in the table for FY 2009 and later. We also hope and expect that we will be able to attract grants to underwrite the capstone course and the development of new, innovative courses to enrich and complement MEPP.

As discussed earlier, the joint program has been devised to generate sufficient funds to enable the two schools to hire new joint faculty members periodically so that (a) the addition of new sections and courses does not result in a decrease in the schools’ adjunct-to-permanent-faculty ratios, and (b) the program is strengthened by the increasing presence of faculty members whose research specifically focuses on the interconnections of engineering and public policy.

II. New Courses and Program Advising

The program proposal has been constructed to minimize immediate needs for new resources. Course requirements are for the most part based on existing University course offerings. Many of these existing courses are not yet at their enrollment capacities and thus can absorb some of the initial students in the program. As the program grows though, new sections will be added to accommodate additional students. The tuition revenues generated by the program are expected to cover the resources needed for these additional sections. Whenever possible, these additional sections will be taught by permanent faculty members. To preserve the current low adjunct-to-permanent-faculty ratios of the two schools, new joint faculty members will be hired as program revenues (and the Provost) permit. These hires will also greatly strengthen the program by bringing on board faculty whose research and teaching specifically focus on the engineering/policy nexus.

The only new courses that will be required are the practice-oriented research course (scholarly practicum) and the capstone course. The capstone course in particular will be based largely on case studies. Initially the faculty will have to rely on off-the-shelf case studies. Over time though, the faculty in the program will develop new case studies that specifically focus on the technical and institutional opportunities and constraints underlying engineering/policy decisions. These case studies will not only strengthen the capstone course but, through their publication, will help bring visibility and stature to the joint program and thus to the University, in turn making it easier to recruit top students and faculty to the program.

MEPP students will be jointly advised on their course selection and “scholarly practicum” (a practice-oriented research paper) by the program directors and by faculty from engineering and public policy in line with the schools’ current faculty advising systems.
Appendix A: Sample Existing Course Selections from Engineering and Public Policy

1. Engineering and Energy and Environmental Policy

Associated Engineering Candidate Core and Elective Courses:
ENCE 633  Chemistry of Natural Waters
ENCE 637  Biological Principles of Environmental Engineering
ENCE 636  Unit Operations of Environmental Engineering (Davis)
ENCE 688Z  Geographic Information Systems for Watershed Analysis
ENCE 623  Interpretation of Satellite Imagery for Regional Analysis
ENCE 630  Environmental and Water Resources Systems I
ENME 706  Impact of Energy Conversion on the Environment
ENME 808A  Phase change heat transfer
ENME 633  Advanced classical thermodynamics
ENME 635  Analysis of energy systems
ENME 706  Impact of Energy Conversion on the Environment
ENBE 603  Transport process in biological systems
ENBE 633  Non-point source pollution control
ENBE 643  Advanced bio-transport processes

Associated Public Policy Elective Courses:
PUAF 740  Public Policy and the Environment
PUAF 745  Human Health and the Environment
PUAF 742  Ecological Economics
PUAF 698O  Energy and Environmental Policy
PUAF 741  Quantitative Aspects of Global Environmental Problems
PUAF 711  Management Strategies in Public Organizations
PUAF 744  Environment and Development

2. Engineering and Infrastructure and Development Policy

Associated Engineering Candidate Core and Elective Courses:
ENCE 746  Pavement Management Systems
ENCE 615  Structural Reliability
ENCE 622  Urban and Regional Systems Analysis
ENCE 672  Regional Transportation Planning
ENCE 673  Urban Transportation Planning
ENCE 677  Operations Research Models for Transportation and Logistics Networks
ENCE 688C  Transportation Planning and Decision Making

Associated Public Policy Elective Courses:
PUAF 698A  Growth Management: Land Use, Environmental and Community Planning
PUAF 711  Management Strategies in Public Organizations
PUAF 716  State and Local Government Budgeting
3. Engineering and National Security Policy

Associated Engineering Candidate Core and Elective Courses:
ENEE 757  Security in Distributed Systems and Networks
ENAE 694  Spacecraft Communications
ENEE 723 Wireless Communication Networks
ENME  Failure Mechanisms and Reliability
ENME  Microelectronic Mechanical systems (MEMS)
ENME  Information Security
ENME  Software Reliability and Integration

Associated Public Policy Elective Courses:
PUAF 722  Terrorism and Democracy
PUAF 698P  Information Policy
PUAF 781  International Economic Policy
PUAF 723  Ethics and Foreign Policy
PUAF 691  Conflict, Cooperation and Strategy

4. Engineering and Manufacturing Policy

Associated Engineering Candidate Core and Elective Courses:
ENCH 786  Polymer Processing and Application
ENCH 858  Advanced Topics in Process Control
ENEE 750  VLSI Design Automation
ENEE 605 (719R)  Design and Fabrication of Micro-Electro-Mechanical Systems (MEMS)
ENME 601  Manufacturing Systems Design and Control
ENME 610  Engineering Optimization
ENME 616  Computer Aided Manufacturing
ENME 770  Life Cycle Cost Analysis

Associated Public Policy Elective Courses:
PUAF 781  International Economic Policy
PUAF 744  Environment and Development
PUAF 752  Tactics and Principles of Negotiation
PUAF 691  Conflict, Cooperation and Strategy
PUAF 700  US Trade: Policy and Politics
PUAF 701  Public Policies Toward Business: Legal Institutions
PUAF 702  Regulatory Analysis
PUAF 725  Science, Technology, and Public Policy
## Item FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 Notes

### A. # Credit Hours

<table>
<thead>
<tr>
<th># of students entering</th>
<th>5</th>
<th>10</th>
<th>16</th>
<th>18</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Part time</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

### B. Program Revenues

| 44,622 | 137,585 | 265,873 | 371,850 | 435,065 |

Initial tuition = $670/credit hour. Program retains 92.5% of tuition revenues.

### C. Expenditures

#### 1. Classes to be covered

a. New course sections needed (expected value) 0.0 3.7 7.2 10.0 11.7 Students absorbed into existing sections 1st year. Thereafter, new sections needed for every 60 credit hours (20 students x 3 credit hours).

b. Program co-director course buyouts 2.0 2.0 2.0 2.0 2.0 One course per co-director

c. Case study development course buyouts 1.0 1.0 1.0 1.0 1.0 One course per case study.

Total classes to be covered 3.0 6.7 10.2 13.0 14.7

#### 2. Salaries & Wages

i. Course Faculty

a. Courses to be covered by new permanent faculty 0.0 0.0 4.0 4.0 8.0 New permanent joint ENGR/MSPA faculty members will be hired, as funds permit, to preserve current adjunct/permanent faculty ratios in schools.

b. Courses to be covered by existing permanent faculty 3.0 3.0 4.0 5.0 2.0 Permanent faculty needed for program directors and case study development. Will also be used in classroom to extent net revenues permit.

c. Courses to be covered by adjuncts 0.0 3.7 2.2 4.0 4.7 Equals courses not taught by permanent faculty
d. New permanent faculty salaries 0 0 100,000 100,000 200,000 Assumes $100,000 on average for new permanent faculty

e. Course buyouts of existing faculty 54,000 54,000 72,000 90,000 36,000 $18,000 per buyout

f. Adjunct faculty salaries 0 27,750 16,125 30,000 35,250 $7500 per course

ii. Program Directors Summer Pay 23,100 11,550 11,550 11,550 11,550 One month per co-director in 1st year, half month per co-director in 2nd year
### APPENDIX B - MEPP PROJECTED BUDGET FY05 to FY09

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 2005</th>
<th>FY 2006</th>
<th>FY 2007</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>iii. Case Study student assistance</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>$6500 per case study</td>
</tr>
<tr>
<td>iv. Program Coordinator</td>
<td>10,000</td>
<td>20,000</td>
<td>20,000</td>
<td>40,000</td>
<td>40,000</td>
<td>25% in 1st year, 50% in 2nd &amp; 3rd year, 100% thereafter. Existing employee in first 3 years, new employee thereafter. $40,000 FTE salary.</td>
</tr>
<tr>
<td>v. New Benefits</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35,000</td>
<td>60,000</td>
<td>New benefits needed for program coordinator and new permanent faculty</td>
</tr>
<tr>
<td><strong>Total Salaries &amp; Wages</strong></td>
<td>93,600</td>
<td>119,800</td>
<td>226,175</td>
<td>313,050</td>
<td>389,300</td>
<td></td>
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#### 3. Operating Expenses

<table>
<thead>
<tr>
<th>i.</th>
<th>Postage &amp; Telephone</th>
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<th>2,000</th>
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<th>4,000</th>
<th>4,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii.</td>
<td>Travel</td>
<td>0</td>
<td>0</td>
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<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>iii.</td>
<td>Printing/Copying</td>
<td>2,000</td>
<td>2,000</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>iv.</td>
<td>Advertising</td>
<td>2,000</td>
<td>2,000</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
</tr>
<tr>
<td>v.</td>
<td>Office Supplies</td>
<td>2,000</td>
<td>2,000</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>vi.</td>
<td>Equipment/Furniture</td>
<td>0</td>
<td>0</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

*Use existing furniture initially. Hope to create separate student lounge if funds permit.

| vii. | Web based support  | 2,000 | 2,000 | 3,000 | 3,000 | 3,000 |
| vili. | Other including student support events | 0 | 0 | 5,000 | 5,000 | 5,000 |

**Total Operating Expenses**

| 10,000 | 10,000 | 35,500 | 35,500 | 35,500 |

**Total Expenditures**

| 103,600 | 129,800 | 261,675 | 348,550 | 424,800 |

### E. Shortfall (Surplus) i.e., Start-up Funds (Refunds)

| (58,978) | 7,785 | 4,198 | 23,300 | 10,265 |

*ENGR and MSPA will cover initial shortfalls and recover them in following years*

### F. Campus Program Income

| 3,618 | 11,156 | 21,557 | 30,150 | 35,276 |

*Campus retains 7.5% of tuition*