Program Review

Master of Science in Engineering (MSE)

College of Information Technology and Engineering

November 2015

MARSHALL UNIVERSITY
Program Review
Marshall University

Date: November 2, 2015

Program: Master of Science in Engineering (MSE)

Degree and Title

Date of Last Review: Academic Year 2010 – 2011

Recommendation
Marshall University is obligated to recommend continuance or discontinuance of a program and to provide a brief rationale for the recommendation.

Recommendation:

Code (R):

1. Continuation of the program at the current level of activity; or

2. Continuation of the program at a reduced level of activity or with corrective action. Corrective action will apply to programs that have deficiencies that the program itself can address and correct. Progress report due by November 1 next academic year; or

3. Continuation of the program with identification of the program for resource development. Resource development will apply to already viable programs that require additional resources from the Administration to help achieve their full potential. This designation is considered an investment in a viable program as opposed to addressing issues of a weak program. Progress report due by November 1 next academic year; or

4. Development of a cooperative program with another institution, or sharing of courses, facilities, faculty, and the like; or

5. Discontinuation of the program

Rationale for Recommendation: (Deans, please submit the rationale as a separate document. Beyond the College level, any office that disagrees with the previous recommendation must submit a separate rationale and append it to this document with appropriate signature.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>October 16, 2015</td>
<td>Edward N. Davis, Signature of person preparing the report.</td>
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<td>Academic Dean, Signature of Program Chair.</td>
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<tr>
<td>2/15/16</td>
<td>Academic Planning Committee (Moderate suggestion).</td>
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<td>4/13/16</td>
<td>Office Provost and Senior Vice President for Academic Affairs.</td>
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<td>Board of Governors.</td>
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Date:
College/School Dean’s Recommendation

Deans, please indicate your recommendation and submit the rationale.

Recommendation:

Continuation of the program at the current level of activity

Rationale:
(If you recommend a program for resource development identify all areas for specific development)

The Master of Science in Engineering (M.S.E.) degree program, offered by Marshall University's College of Information Technology and Engineering (CITE), is a multi-disciplinary engineering program designed to meet the specific needs of engineers employed in industry, government and consulting firms in the region. Three areas of interest were recently turned into majors which include Engineering Management, Environmental Engineering, and Transportation and Infrastructure Engineering. These majors make the program more attractive to students and employers. The M.S.E. program utilizes one full-time graduate engineering faculty member (the M.S.E. Program Coordinator) and part-time services of six B.S.E. program faculty members in CITE’s Wiesberg Division of Engineering, as well as part-time services of two full-time faculty members in CITE’s Applied Science and Technology Division. For the past five years, the M.S.E. program has had a 50% increase in enrollment over the previous five-year period as documented in the last program review. A hundred percent of our graduates either have full-time employment in their fields, or in related fields; an indication of employer satisfaction. These and other factors, including employer needs in all fields of engineering related to infrastructure maintenance and development, provide opportunities for future program growth.

For the reasons listed above, I recommend continuation of the program at the current level of activity.

Signature of the Dean

Date 11/02/2015
Marshall University  
Program Review  

For purposes of program review, the academic year will begin in summer and end in spring.  

**Program:** Master of Science in Engineering (MSE)  

**College:** Information Technology and Engineering  

**Date of Last Review:** Academic Year 2010 – 2011  

**I. CONSISTENCY WITH UNIVERSITY MISSION**  

The mission of the M.S.E. degree program, developed in accordance with standards adopted by the Accreditation Board for Engineering and Technology, is to provide multi-disciplinary, graduate level engineering education appropriate for working professionals and others who do not have the option of full-time programs in a traditional university setting, as well as to full-time students, in a format that meets the needs of all these groups.  

CITE will continue to provide academic instruction and service to provide life-long learning and career enhancement opportunities to its students in the business, industrial and government communities and to enhance the economic development of the region. The M.S.E. degree program is based in the Charleston-Huntington area, but is offered at other sites as the need arises. Course content and scheduling are designed to serve the needs of a student population that consists both of fully employed professionals, and has a growing number of full-time students.  

The Master of Science in Engineering (M.S.E.) degree program, offered by Marshall University’s College of Information Technology and Engineering (CITE), is a multi-disciplinary engineering program designed to meet the specific needs of engineers employed in industry, government and consulting firms in the region. The program is housed within CITE’s Weisberg Engineering Division, and offers a central core curriculum with opportunities for concentrated study in selected majors. Majors currently available include Engineering Management, Environmental Engineering, and Transportation and Infrastructure Engineering.  

The M.S.E. degree supports the university mission statement in that it provides a multi-campus affordable, high quality graduate education for the state and region using all appropriate modes of delivery and promotes economic development through research, collaboration, and technological innovations needed for our region.
Adequacy of the Program

1. Curriculum:

The Master of Science in Engineering (M.S.E.) degree program, offered by Marshall University’s College of Information Technology and Engineering (CITE), is a multi-disciplinary engineering program designed to meet the specific needs of engineers employed in industry, government and consulting firms in the region. The program is housed within CITE’s Weisberg Engineering Division, and offers a central core curriculum with opportunities for concentrated study in three majors. Majors currently available include (1) Engineering Management, (2) Environmental Engineering, and (3) Transportation and Infrastructure Engineering.

M.S.E. degree students are required to complete a minimum of 30-33 graduate credit hours, depending on the option chosen by the student. There are three options for each major: (1) Courses plus Comprehensive Project, (2) Courses plus Thesis, and (3) Courses Only. The comprehensive project, which comprises three hours of the core, typically is an applied project that requires a fusion of the knowledge obtained in the course work and its application to a realistic problem from the relevant subject area. The thesis is generally research oriented.

Generally each student must select from a core group of courses which depend on the individual major chosen, with the addition of one to four electives.

Majors

**Engineering Management:** This major is designed for engineers who hold or wish to move into a management position, and requires courses in the following areas: Management of Technical Human Resources and Organizations; Operations Management; Project Management; Seminar in Engineering Management; Engineering Law; and Engineering Economics. Students may also take courses from the Technology Management degree program, with advisor approval. These topics provide the foundation for engineering management education. In addition, with advisor approval in a Plan of Study, students complete additional hours of electives, which can include technical/design engineering courses or more advanced management courses, depending on the particular student’s interests and goals.

**Environmental Engineering:** The major in environmental engineering is designed for those engineers who work or wish to work in such areas as water/wastewater treatment, groundwater and soil remediation, solid and hazardous waste management, air pollution control, and industrial hygiene.
Students must complete courses in Project Management; Water and/or Wastewater; Solid and/or Hazardous Waste; Air Pollution; Hydraulics and/or Hydrology; and Environmental Remediation and/or Risk Management. They also take elective environmental engineering courses approved by the advisor.

Transportation and Infrastructure Engineering: This major is designed for those engineers who work or wish to work in the civil engineering related areas of transportation and highway engineering and/or infrastructure engineering having to do with design of bridges, steel, and/or concrete structures. Students pursuing the Project Option and the Thesis Option must choose either Transportation Engineering or Structural Engineering as their primary focus. The other discipline will be the secondary focus. Three courses must be completed in the primary focus and two courses in the secondary focus for the Project and Thesis Option. The Coursework Only Option requires three courses in both disciplines.

For details of the course requirements for each major, please see Appendix I.

2. Faculty:

The M.S.E. program utilizes one full-time graduate engineering faculty member (the M.S.E. Program Coordinator) and part time services of six B.S.E. program faculty members in CITE’s Weisberg Engineering Division, as well as part-time services of two full-time faculty members in CITE’s Division of Applied Science and Technology. Of these faculty members, seven are tenured and two are tenure-track. Several are registered professional engineers. All hold terminal degrees in their fields of expertise.

All but two of the full-time faculty were professionally employed in fields relevant to their teaching emphases prior to joining CITE, and continue to be very actively involved in their professions through consulting, funded research, professional societies, and other service activities. One of the above faculty members—the M.S.E. Program Coordinator—is involved full-time in the M.S.E., while the other faculty also teach courses in CITE’s other degree programs. This full-time faculty member regularly publishes and presents papers at national conferences.

Essentially all of these faculty members are very active in their fields, both academically and professionally, serving on national and local boards, publishing papers and attending conferences regularly. Details may be seen in the faculty data sheets of Appendix II.

The program has no graduate teaching assistants, which is clearly an area for growth. This is hard to imagine in a graduate engineering program of this size.
Several carefully selected and highly qualified adjunct faculty teach courses in the M.S.E. degree program, especially in courses where current, ongoing engineering practice plays an important role in course content and where our current faculty are not able to cover the needed courses due to already teaching full course loads.

Please see Appendix II for the Faculty Data Sheets for the M.S.E. and B.S.E. engineering faculty, as well as those in the Applied Science and Technology Division who regularly teach courses needed by the M.S.E. degree students.

3. Students:

a. **Entrance Standards:**

Following are the admission requirements for the M.S.E. degree program:

Each applicant for admission to the M.S. in Engineering degree program must have an undergraduate engineering degree from either an accredited ABET curriculum or an internationally recognized program and meet one of the following (A, B, or C) admission requirement options:

A. Pass the PE exam, or
B. Have an undergraduate cumulative GPA of 3.00 or greater, or
C. Have an undergraduate cumulative GPA of 2.50 or greater, and satisfy at least two of the following:
   1. Pass the FE exam,
   2. verbal GRE score at least 145,
   3. quantitative GRE score at least 150, and/or
   4. analytical writing GRE score at least 3.0.

Additionally, to be considered for admission, international students must have an iBT TOEFL score of at least 85, or a Paper-Based TOEFL score of at least 527.

Students who do not meet admission requirement options A, B, or C are welcome to apply, and their applications will be considered for admission on a case by case basis. The program admission recommendation will be decided by the M.S.E. degree program coordinator based on a combination of GRE scores and level of performance in undergraduate engineering coursework.

Applicants who do not meet the above criteria but have an undergraduate engineering degree are welcome to apply as non-degree seeking students and take classes toward their M.S.E. degree. If the student has a minimum cumulative graduate GPA of 3.30 in his or her first 9 credit
hours of CITE M.S.E. courses, that student may re-apply to the university to be considered for admission to the M.S.E. degree program.

b. **Entrance and Exit Abilities of past five years of graduates:**

c. Appendix III shows that our last five years of graduate students entered the program with undergraduate GPAs that ranged from yearly means of 2.97 to 3.39. The yearly mean GRE Verbal scores ranged from 350 to 490, and the yearly mean GRE Quantitative scores ranged from 585 to 745, and the mean GRE Writing scores ranged from 3.0 to 4.25. Appendix IV shows that these graduates compiled respectable GPAs during their graduate program, with yearly means ranging from 3.73 to 3.94.

4. **Resources:**

a. **Financial:**

This MSE program with its three majors is built on the foundation of the BSE program. It is supervised by the Chair of the Engineering Division (1/8 FTE), and managed by the Program Coordinator (PC); who is a full time faculty in the Division with 25% time release (1/4 FTE). Many full time engineering faculty contribute to the MSE. Their contributions come in many forms such as teaching courses, supervising graduate students in their papers and projects, and student advising. Over the last two years the MSE program has utilized 2 FTE/year including the PC and the Chair. The estimated cost for these 2 FTE is about $230,000/year including all benefits. In addition, the Program has paid around $35,000/ year for adjuncts; which brings the estimated annual cost of the Program to about $265,000.

Based on 2014-15 academic year enrollments, The Program has generated a total of 777 graduate SCH, which is equivalent to 86.33 FTE. About 35% of students enrolled in the Program are residents. Resident’s tuitions and CITE fees are estimated to be $4084/ Semester and $9379.00/ Semester for non-residents. Therefore, the average tuitions and CITE fees are $7525/Semester. The estimated revenue from tuitions and fees are $650,000/year.

From the aforesaid estimates, it is evident that the Program is financially viable.

b. **Facilities:**

CITE provides its students a variety of modern, technologically advanced facilities designed to support and enhance their studies. New and well-equipped classroom and laboratory facilities designed especially for
adult learners are available in the new Weisberg Applied Engineering Complex and the Arthur Weisberg Family Engineering Laboratories building in Huntington, and in the Robert C. Byrd Academic and Technical Center on the South Charleston campus. All M.S.E. courses are regularly offered from one or both of these locations. In addition, classes are offered at other locations according to justifiable demand.

The M.S.E. degree program frequently and regularly makes use of multiple distance learning classrooms, which link the Huntington and South Charleston campuses with innovative and up-to-date class delivery capabilities. State-of-the-art computer facilities and labs are available to students on both campuses. Equipment and software are well-maintained and up-to-date in order to provide full support to M.S.E. students and faculty.

With respect to research and other study needs, M.S.E. students have access to both the John Deaver Drinko library on the Huntington campus and the South Charleston campus library.

5. Assessment Information:

a. Please refer to Appendix V for a summary of our program’s assessment of student learning.

The M.S.E. degree is divided into three majors: Engineering Management, Environmental Engineering, and Transportation and Infrastructure Engineering. Each major has inherently largely different needed student learning outcomes.

Because the M.S.E. degree has been undergoing very significant changes in the past several years, almost every year, like changing Areas of Emphasis to three new majors just this past year, and redefining degree and major requirements, and because we have been shifting much of our M.S.E. faculty load from mostly adjunct faculty to hiring new undergraduate faculty who can help with the M.S.E. degree, we need to completely revise our student learning outcomes. This is going to be happening over the next two years with a concerted effort.

In the Engineering Management major, we are focused heavily on the student’s ability to plan and carry out projects, develop and demonstrate teamwork, understand and apply basic tools and concepts of operations management, understand financial and cost/benefit concepts, understand and adequately apply important concepts of communications and ethical behaviors, and be able to apply statistical analysis concepts appropriately.

In the Environmental Engineering major, we are focused heavily on the student’s ability to plan and carry out projects, develop and demonstrate
teamwork, demonstrate ability to apply basic tools and concepts related to
environmental chemistry, risk assessment, and environmental law,
demonstrate understanding and application of professional, ethical, and legal
responsibilities, and appropriately apply statistical concepts and tools.

The Transportation and Infrastructure Engineering major is still
relatively new, and we have now hired new faculty in this area, and so we will
be developing the student learning outcomes for that major.

The assessment tools we use consist mainly of writing and
computational assignments, team projects, examinations, applied
comprehensive projects, and written and oral presentations.

b. Other Learning and Service Activities:

None

c. Plans for Program Improvement:

We plan to make a concerted effort to revise our assessment
measures over the next couple of years, as it has been in an upheaval with
our newly developed majors and lack of resources (full-time faculty) to do the
assessments. We are getting into a stronger position with respect to faculty
who are helping with the M.S.E. degree, so that now we can focus more on
assessment. We hope to have this developed and tested by Fall of 2017 for
all three majors so that our assessment measures will be fully implemented at
that point.

Additionally, we now have a very strong Engineering Management
major. This fall (2015), we have 40 students in that major. It is strongly felt
by the Weisberg Engineering Division faculty and administrators that it is time
to break this major away from the M.S.E. degree program, and make it a
degree program itself. We project that this degree program will
conservatively enroll between 45-55 graduate students every year for the next
five years. Therefore, we will begin this year to prepare an Intent to Plan for
the new Master of Science in Engineering Management degree program
(M.S.E.M.) to be broken off from the M.S.E. degree program.

d. Graduate Satisfaction:

Graduate satisfaction has been measured informally. Graduate
surveys for the M.S.E. program frequently have had only a few respondents,
which makes the survey of little utility. Instead, we use focus groups, informal
discussions with graduates, course evaluations by current students,
suggestions from other faculty and employers, and contacts with other engineers to help us measure the effectiveness of the educational experience of our graduates. Also, 100% of our graduates are employed full time in their fields, or a few in related fields, which is an indication of employer satisfaction.

e. Please refer to Appendix IX for letters from the Office of Assessment providing feedback regarding the program’s assessment of student learning.

6. **Previous Reviews:** At its meeting on April 28, 2011, the Marshall University Board of Governors recommended that the Master of Science in Engineering (MSE) continue at its current level of activity.

7. **Identify weaknesses and deficiencies** noted in the last program review and provide information regarding the status of improvements implemented or accomplished.

In its last program review, submitted in academic year 2010 – 2011, the Master of Science in Engineering (MSE) identified the following weaknesses. These are transcribed from that report:

“That weaknesses of the program are related primarily to the unique nature of the program’s mission. Meeting the ever-changing demands of the regional engineering community can be a challenge, and faculty can easily become overwhelmed by nonteaching and non-research responsibility, such as setting up off-site programs and working to accommodate the particular, specific needs of part-time, employed students who often experience conflicts between course and work demands. The current engineering job market has been very favorable for students, but has had the related effect of inflating adjunct salaries in engineering disciplines. However, because adjunct involvement is a crucial and popular component of the program, CITE will continue to attempt to obtain resources to support the increasing expense of adjuncts.”

Much has happened since the 2010-2011 program review. We continue to teach a wide variety of adult learners, from full-time students to full-time working professionals who can only take evening courses. This is not truly a weakness, but an opportunity that is very good. It helps our full-time students gain from the experience of the full-time working professionals, and it makes it possible for working professionals in the State of West Virginia to further their education, and thus benefits the state and local economies and population.

Many of the program needs related to shortage of faculty are beginning to be seriously addressed, as our engineering programs are rapidly growing and so new faculty hires can be justified. As an example, for our Engineering Management major alone we have grown from about 11 students to over 40, and
we predict very conservatively that number will be between 45-60 over the next five years. Again, this is helping to justify the need for additional faculty for our graduate engineering degree programs.

There is only one off-site engineering group, which has 10 graduate students—a significant number. These students are full-time engineers who are earning master’s degrees, again benefitting both them and the State of West Virginia. This would seem to be a strength.

With respect to adjunct faculty salaries, these are still woefully low for adjuncts in the engineering field.

8. Current Strengths/Weaknesses:

The principal strengths of the M.S.E. degree program include its versatile, experienced, multi-disciplinary full-time faculty; its group of qualified, expert, adjunct faculty; its mature, committed, and professional students; and a mission that enables CITE and its Weisberg Engineering Division to serve the region’s engineering community in a meaningful and necessary way. The collective faculty—both full-time and adjunct—have many years of relevant work experience and are oriented toward application and research.

M.S.E. students are a major strength of the program. Many of the students are working in related fields, and many are using advanced technology and systems required to maintain the viability of their various enterprises. This greatly enriches the learning environment in the classroom—students share their experiences, insight and knowledge with classmates and also put substantial pressure on faculty to remain current and to be relevant in the classroom.

Another strength of CITE’s M.S.E. program is location. The Advantage Valley corridor, which includes Charleston and Huntington, includes a concentrated community of engineering professionals employed by the manufacturing industry, consulting firms, and government agencies such as the Department of Transportation and Department of Environmental Protection. Most of these employers encourage life-long learning and career enhancement of their employees by providing tuition reimbursement and other support.

The flexibility of CITE and the M.S.E. program to meet students’ needs is a strength identified frequently by students and employers. Within the framework of the required core courses, an engineering field major, and electives, plans of study can be tailored to meet the needs of individuals or groups of students. Class hours, class locations, and accessibility of facilities also serve CITE students well.

The weaknesses of the program are mainly challenges to meet the growing number of students, especially international students. We have been and will continue communicating with the INTO people regarding the challenges
our international students are having with English. With respect to the increasing numbers of students, we are hoping to hire more full-time faculty.

We continue to be underfunded with respect to paying adjunct faculty at a rate that is competitive for professional engineers. We will continue to request help from the university to allow us to be competitive.

II. Viability of the Program:

1. Articulation Agreements: None

2. Off-Campus Classes: We currently have a cohort of 15 graduate students in Parkersburg, WV. Eleven of these students are engineering students and five are technology management students. This cohort started in the summer of 2015 and will complete their studies in 2018.

3. Online Courses: None

4. Service Courses: We have two main courses that are used by other majors: EM 660 Project Management and ENGR 610 Applied Statistics. Besides the Engineering Majors, students who take these courses are mainly from Technology Management, Environmental Science, Information Systems, and some students from the College of Business.

5. Program Course Enrollment:

See Appendix VI.

6. Program Enrollment:

For the past five years, we have had an average program enrollment of 33 students per year. That is approximately a 50% increase in the average over the previous five-year period for the previous program review! This fall (Fall 2015), we now have 63 graduate M.S.E. degree students, when including those in the INTO pathway! This is three times the number of students we averaged in our 2005-2010 program review, and double the average number of students in this 2010-2015 program review period! This is a dramatic increase, which increase we expect to continue both because of INTO admissions and because of the increased visibility of the program due to the new Weisberg Applied Engineering Complex. Thus, we will have growing pains, which is exciting.

Over the past five years we have graduated 57 students from the M.S.E. degree program. This number is set to dramatically increase because of the rapid increase in INTO students this past year, due in part to our offering of our three new majors, which were previously just three areas of emphasis.
Currently (Fall 2015), the 63 M.S.E. students (including INTO pathway students) are distributed as follows among the three majors:

- 40 Engineering Management (10 are INTO pathway students)
- 10 Environmental Engineering (2 are INTO pathway students)
- 13 Transportation and Infrastructure Engineering (4 are INTO pathway students)

Please see Appendix VII and Figure 1 for more details.

7. Enrollment Projections:

Below are shown the enrollment projections for each of the three M.S.E. majors for the next five years (Engineering Management; Environmental Engineering; and Transportation and Infrastructure Engineering), based on historical trends of local students enrolled in the degree, and trends in the INTO Pathway enrollments, using a conservative estimate of the yearly increases. Our current total enrollment for Fall 2015 is 63 students, as shown above. There is a dip in the 2018 enrollment in Engineering Management due to the expected graduation of 10 students in our Parkersburg cohort that year.

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IV. Necessity of the Program:

1. Advisory Committee:

Our advisory committee meets at least twice per year. We have received very valuable input from these people, all of whom are very experienced industrial engineers and/or managers who know what is important for potential engineering employees to be learning. They have given us full support in moving from three areas of emphasis to our three new majors, and have been very willing to help raise money and give whatever support they possibly could. This has resulted in a much stronger program, which will continue to get stronger with their continued support.
2. **Graduates:**

   Please see Appendix VIII.

3. **Job Placement:**

   Our job placement rate is extremely high, with all of our graduates working either in their fields, or fields closely related. We encourage our students to participate in the university’s job fairs.

V. **RESOURCE DEVELOPMENT (If applicable)**

   Not applicable.
Appendix I
Required/Elective Course Work in the Program

Degree Program: Master of Science in Engineering  
Person responsible for the report: Dr. Eldon R. Larsen

Degree Requirements
Each degree candidate is required to complete at least 30-33 graduate credit hours, depending on the “option” chosen below (project, thesis, or coursework only), with a cumulative Grade Point Average of 3.0 for the courses included in the student’s Plan of Study. At least one-half of the minimum required hours for the degree must be earned in classes numbered 600 or above.

Each degree-seeking student must file an approved “Plan of Study,” developed with a faculty advisor, before the student registers for the 12th credit hour. The Academic Regulations portion of the Graduate Catalog may be consulted for additional information.

A student may only earn the M.S.E. degree once. Therefore, students wishing to complete two of the three M.S.E. majors (i.e., double major) must complete all requirements for both majors before the degree is awarded. A maximum of 12 credit hours may be counted toward both majors, as approved by the student’s academic advisor in each major. An option must be selected for each major and the two options are permitted to be different. However, each major must have its own comprehensive assessment (i.e., comprehensive project, thesis, or comprehensive examination). For example, a single thesis and defense cannot satisfy the requirements for both majors.

Students may choose to complete either the “project option,” the “thesis option,” or the “coursework only option” after consultation with their academic advisor.

Project Option. The comprehensive project involves the application of coursework completed as part of the degree to a practical problem. Students will work with their advisor to identify an appropriate project and scope. Students must prepare a formal written report and deliver an oral presentation to a committee. Students register for TE 699 Comprehensive Project (3 HR) during the semester in which their project will be completed and presented, but preliminary work on the project may commence before that semester.

Thesis Option. The thesis option involves the completion of 6 HR of research (ENGR 682) under the direction of an advisor on an approved project. Students must summarize their work in the form of a formal, written document and successfully defend the thesis before a committee. Thesis work is typically conducted over two semesters.

Coursework Only Option. Students can complete 33 hours of coursework and then complete a comprehensive examination within the last two semesters of graduation to fulfill the requirements of their degree. Examinations will be administered once per semester for all students.
MAJOR: Engineering Management

**Project Option.** (30 hours)

Required courses
- EM 620 Management of Technical Human Resources and Organizations .....3 hrs
- EM 660 Project Management .................................................................3 hrs
- EM 668 Operations Management ..........................................................3 hrs
- EM 670 Seminar in Engineering Management .........................................3 hrs
- EM 675 Engineering Economics (or TM equivalent).................................3 hrs
- EM 694 Engineering Law ........................................................................3 hrs
- ENGR 610 Applied Statistics .....................................................................3 hrs
- TE 699 Comprehensive Project ..............................................................3 hrs

Elective courses (see approved Engineering Management electives below).........6 hrs

**Thesis Option.** (30 hours)

Required courses
- EM 620 Management of Technical Human Resources and Organizations .....3 hrs
- EM 660 Project Management .................................................................3 hrs
- EM 668 Operations Management ..........................................................3 hrs
- EM 670 Seminar in Engineering Management .........................................3 hrs
- EM 675 Engineering Economics (or TM equivalent).................................3 hrs
- EM 694 Engineering Law ........................................................................3 hrs
- ENGR 610 Applied Statistics .....................................................................3 hrs
- ENGR 682 Research ................................................................................3 hrs

Elective course (see approved Engineering Management electives below) ............3 hrs

**Coursework Only Option.** (33 hours)

Required courses
- EM 620 Management of Technical Human Resources and Organizations .....3 hrs
- EM 660 Project Management .................................................................3 hrs
- EM 668 Operations Management ..........................................................3 hrs
- EM 670 Seminar in Engineering Management .........................................3 hrs
- EM 675 Engineering Economics (or TM equivalent).................................3 hrs
- EM 694 Engineering Law ........................................................................3 hrs
- ENGR 610 Applied Statistics .....................................................................3 hrs

Elective courses (see approved Engineering Management electives below)............12 hrs

Approved Elective Courses for the Engineering Management Major

Any EM (Engineering Management) course.

Any TM (Technology Management) course.
Any College of Business course approved in advance by the advisor.
Any engineering course approved in advance by the advisor.

MAJOR: Environmental Engineering

All Environmental Engineering majors must have completed the Foundation Courses listed below (and their associated prerequisites), or their equivalents as approved by their advisor before being fully admitted. Until this requirement is satisfied, the student can only receive Provisional admission to the program. All other admission requirements must still be satisfied.

Foundation Courses:
ENGR 318 Fluid Mechanics
CE 331 Hydraulic Engineering
CE 432 Water/Wastewater Treatment

Project Option. (30 hours)

Required courses
One of: ENGR 610, ENGR 620, or ME 601 ..........................................................3 hrs
ENVE 615 Environmental Chemistry .................................................................3 hrs
TE 699 Comprehensive Project .................................................................3 hrs

Three courses – one per category – from among the following six categories..........9 hrs
(1) Project Management: EM 660
(2) Water/Wastewater: ENVE 616 or ENVE 617
(3) Solid/Hazardous Waste: ENVE 620 or ENVE 625
(4) Air Pollution: ENVE 611, ENVE 612, ENVE 680, or ES 604
(5) Hydraulics/Hydrology: ENVE 670, ENVE 671, or ENVE 672
(6) Env. Remediation/Risk/Mgmt: ENVE 682, ES 514, ES 620

Elective courses (see approved Environmental Engineering electives below)......... 12 hrs

Thesis Option. (30 hours)

Required courses
One of: ENGR 610, ENGR 620, or ME 601 ..........................................................3 hrs
ENVE 615 Environmental Chemistry .................................................................3 hrs
ENGR 682 Research ..................................................................................6 hrs

Three courses – one per category – from among the following six categories ..........9 hrs
(1) Project Management: EM 660
(2) Water/Wastewater: ENVE 616 or ENVE 617
(3) Solid/Hazardous Waste: ENVE 620 or ENVE 625
(4) Air Pollution: ENVE 611, ENVE 612, ENVE 680, or ES 604
(5) Hydraulics/Hydrology: ENVE 670, ENVE 671, or ENVE 672
(6) Env. Remediation/Risk/Mgmt: ENVE 682, ES 514, ES 620
Elective courses (see approved Environmental Engineering electives below)

**Coursework Only Option.** (33 hours)

Required courses
- One of: ENGR 610, ENGR 620, or ME 601 .................................................................3 hrs
- ENVE 615 Environmental Chemistry .................................................................3 hrs

Three courses – one per category – from among the following six categories ........9 hrs
- (1) Project Management: EM 660
- (2) Water/Wastewater: ENVE 616 or ENVE 617
- (3) Solid/Hazardous Waste: ENVE 620 or ENVE 625
- (4) Air Pollution: ENVE 611, ENVE 612, ENVE 680, or ES 604
- (5) Hydraulics/Hydrology: ENVE 670, ENVE 671, or ENVE 672
- (6) Env. Remediation/Risk/Mgmt: ENVE 682, ES 514, ES 620

Elective courses (see approved Environmental Engineering electives below) .........18 hrs

**Approved Elective Courses for the Environmental Engineering Major**
- Any ENVE course.
- Any course listed above not already taken.
- ES 550 Environmental Law
- ES 630 Environmental Site Assessment
- ES 640 Groundwater Principles and Monitoring
- Other courses approved in advance by the student’s advisor.

**MAJOR: Transportation and Infrastructure Engineering**

All Transportation and Infrastructure Engineering majors must have completed the Foundation Courses listed below (and their associated prerequisites), or their equivalents as approved by their advisor before being fully admitted. Until this requirement is satisfied, the student can only receive Provisional admission. All other admission requirements must still be satisfied.

**Foundation Courses:**
- CE 312 Structural Analysis
- CE 342 Transportation Engineering
- CE 413 Reinforced Concrete or CE 414 Steel Design

Students pursuing the Project Option and the Thesis Option must choose either Transportation Engineering or Structural Engineering as their primary focus. The other discipline will be the secondary focus. Three courses must be completed in the primary focus and two courses in the secondary focus for the Project and Thesis Option. The Coursework Only Option requires three courses in both disciplines.

**Project Option.** (30 hours)
ENGR 610 Applied Statistics or other Advisor Approved MTH course.................3 hrs
Three (3) Courses in Primary Focus (Structural Engr or Transportation Engr) ..........9 hrs
Two (2) Courses in Secondary Focus (Structural Engr or Transportation Engr) ......6 hrs
Three (3) Elective Courses.........................................................................................9 hrs
TE 699 Comprehensive Project .................................................................................3 hrs

**Thesis Option**. (30 hours)

ENGR 610 Applied Statistics or other Advisor Approved MTH course.................3 hrs
Three (3) Courses in Primary Focus (Structural Engr or Transportation Engr) ..........9 hrs
Two (2) Courses in Secondary Focus (Structural Engr or Transportation Engr) ......6 hrs
Two (2) Elective Courses.............................................................................................6 hrs
ENGR 682 Research .....................................................................................................6 hrs

**Coursework Only Option**. (33 hours)

ENGR 610 Applied Statistics or other Advisor Approved MTH course.................3 hrs
EM 660 Project Management .......................................................................................3 hrs
Three (3) Courses in Structural Engineering ..............................................................9 hrs
Three (3) Courses in Transportation Engineering ....................................................9 hrs
Three (3) Elective Courses.............................................................................................9 hrs

**Structural Engineering Courses**

CE 612 – Structural Steel Design and Behavior (3 hrs)
CE 614 – Advanced Reinforced Concrete Structure Design and Behavior (3 hrs)
CE 616 – Pre-stressed Concrete Design (3 hrs)
CE 618 – Bridge Engineering (3 hrs)
ENGR 570 – Finite Element Analysis (3 hrs)

**Transportation Engineering Courses**

CE 534 – Geometric Design of Highways (3 hrs)
CE 538 – Pavement Design (3 hrs)
CE 634 – Traffic Engineering (3 hrs)
CE 635 – Evaluation of Transportation Systems (3 hrs)
CE 636 – Transportation Planning (3 hrs)
CE 637 – Highway Safety Engineering (3 hrs)

**Approved Elective Courses for the Transportation and Infrastructure Engineering Major**

Any Transportation Engineering or Structural Engineering course not already taken.
Any ENVE (Environmental Engineering) course approved in advance by the student’s advisor.
Any EM (Engineering Management) course approved in advance by the student’s advisor.
Other courses approved in advance by the student’s advisor.
Appendix II  
Faculty Data Sheet  
May 15, 2010 - May 15, 2015

Name: Richard D. Begley  
Rank: Professor

Start Date at Marshall as a Faculty Member: January 16, 1990

Status: Tenured

Highest Degree Earned: Ph D  
Date Degree Received: 1990

Conferring Institution: West Virginia University, Morgantown WV

Area of Degree Specialization: Mining Engineering, Geology and Rock Mechanics

Professional Registration/Licensure:

| Field of Registration/Licensure | Successful completion of the nationalized Fundamentals of Engineering Exam. Most states accept this regardless of its attainment date since it was the nationalized exam. Certification resulting from examination and adequate number of years of experience working in an underground coal mine combined with education. |

Agency: WV State Board for Registration of Professional Engineers, WV Office of Miners' Health and Training

| Date Obtained, Expiration Date | Obtained: December 1, 1998  
Obtained: June 1, 1980 |

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. *(Expand the table as necessary)*

<table>
<thead>
<tr>
<th>Term/Year</th>
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<th>Title</th>
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<th>% Respon</th>
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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

**Contracts, Grants and Sponsored Research**


**Intellectual Property**

Szwilski, A. B., Begley, R. D., Patent, "Motion Induced Generator", # 7629700, Regular, United States.


**Research Currently in Progress**


2) Service

Department

Engineering Division Scholarship Committee, Committee Chair, (January 1, 2015 - Present).

Liason to RCBI for ME AOE, Serves as liason between division of the manufacturing center for utilization of facilities, (September 30, 2013 - Present).

Real World Engineering Challenge, Faculty Advisor, (January 1, 2013 - Present).

Student Recruitment, Attending various high school recruitment events, (September 1, 2012 - Present).

Assistant Professor Search Committee (Two Openings), Committee Member, (August 30, 2012 - Present).

Theta Tau Fraternity, Faculty Advisor, (August 30, 2012 - Present).

Geologic Engineering AOE Development Committee, Committee Member, (January 1, 2012 - Present).

Assistant Professor in Mechatronics Search Committee, Committee Chair, (December 1, 2014 - May 30, 2015).

Planning Committee for a Geotechnical Workshop, Committee Member, (September 6, 2012).

University

Pickens Quenn Faculty Teaching Awards, Committee Member (August 30, 2012 - Present).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Faculty Development Activities Attended

Workshop, "Writing Across the Curriculum Training Workshop", MU CTL, Huntington, WV, US. (October 18, 2014).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Gang Chen

Rank: Associate Professor

Start Date at Marshall as a Faculty Member: August 17, 2012

Status: Probationary

Highest Degree Earned: Ph D
Date Degree Received: 1997

Conferring Institution: Nanyang Technological University, Singapore

Area of Degree Specialization: Structural Engineering

Professional Registration/Licensure:

Field of Registration/Licensure:

Agency:

Date Obtained, Expiration Date:

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
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1) Scholarship/Research

Contracts, Grants and Sponsored Research

Chen, G. (Co-Principal), Sponsored Research, "Tribology and dynamics for ultra-high precision micromachining, Grant ID: 51375195", Natural Science Foundation of China, Other, $800,000.00, Funded. (October 2013 - September 2017).

Chen, G. (Co-Principal), Sponsored Research, "Uncertain Vibration Diagnosis and Control, NSFC Grant ID: 51275085", Natural Science Foundation of China, Other, $800,000.00, Funded. (October 2012 - September 2015).

Huffman, J. T. (Co-Principal), Chen, G. (Co-Principal), Sponsored Research, "Measurement of lateral earth pressures behind fully integral bridge abutments by measuring nonlinear vibration response to vehicle loads (Not Funded)"., West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 1, 2014 - December 31, 2014).

Huffman, J. T. (Co-Principal), Chen, G. (Co-Principal), Sponsored Research, "Detection of Bridge Damages Using Nonlinear Vibration-Based Health Monitoring (Not Funded)", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 31, 2012 - December 31, 2013).

Huffman, J. T. (Co-Principal), Chen, G. (Co-Principal), Sponsored Research, "Measurement of lateral earth pressures behind fully integral bridge abutments by measuring nonlinear vibration response to vehicle loads (Not Funded)", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 31, 2012 - December 31, 2013).

Chen, G. (Principal), Sponsored Research, "Critical Issues in Friction Dynamics", Beihang University, China, Local, $20,000.00, Not Funded. (December 15, 2013 - December 25, 2013).

McIntosh, J. D. (Co-Principal), Chen, G. (Principal), Huffman, J. T. (Co-Principal), Sponsored Research, "Development of an Illigent Diagnosis Systyem to Evaluate Roof Bolt Integrity", Alpha Foundation, Private, $80,000.00, Not Funded. (March 15, 2013 - May 15, 2013).

Intellectual Contributions


Chen, G. (2014). Identification of contact bouncing vibrations using TFC active slider and adaptive fuzzy control for


Chen, G., Chang, J. Chaos in Nonlinear Dynamics of Air Bearing Slider in Contact. *Journal Microsystem Technology / Springer*, 20, 1739-1744..


**Presentations**

Chen, G., Keynote/Plenary Address, SAE International Congress 2014 Powertrain NVH session, SAE International,


**Research Currently in Progress**


Chen, Gang, John, James, "Nano scale interface dynamics", On-Going, Scholarly.

Chen, Gang, Jeff, "Roofbolting Diagnosis", On-Going, Scholarly.

Chen, Gang, "Tribology and dynamics for ultra-high precision", On-Going, Scholarly.

Chen, Gang, Zengshi, Weimin, "Tubular Rod Dynamics of Sucker Pump System", On-Going, Scholarly.

Chen, Gang, Yongfu, "Uncertainty Vibration Control", On-Going, Scholarly.

Huffman, Jeffery T, Chen, Gang, "Utilizing Nonlinear Vibrations to Evaluate Lateral Earth Pressures Against Concrete Structures", On-Going, Scholarly.

Huffman, Jeffery T, Chen, Gang, "Utilizing Nonlinear Vibrations to Evaluate Mine Roof Bolt Bonding", On-Going, Scholarly.

**Directed Student Learning and Research**

Mickel, Z., Cooper, D., Research, Supervised Research, Engineering Department, Completed. (September 2014 - December 2014).


Ross, T., McMahon, J., Research, Supervised Research, Engineering Department, "Roof bolting diagnosis", Completed. (February 2014 - May 2014).
Xiao, F., Research, Doctoral Advisory Committee Member, Other (Outside Marshall University) Department, CE, In-Process. (January 2013 - December 2013).

Quan, Z., Research, Master's Thesis Committee Chair, Completed. (January 2013 - July 2013).

Nash, M., Research, Master's Thesis Committee Member, Completed. (January 2013 - July 2013).


Huang, D., Research, Doctoral Advisory Committee Member, In-Process. (April 2011 - January 2013).


2) Service

Department


ME program committee, Committee Member, (January 2014 - December 2014).

ME faculty search committee, Committee Member, (January 2014 - May 2014).

Search committee for two new ME faculty members, Committee Member, (January 10, 2013 - December 2013).

ABET committee, Committee Member, (August 20, 2013 - December 5, 2013).

Faculty Travel Fund Committee, Committee Member, (August 2013 - November 2013).

ME Course Committee, Committee Member, (August 2013 - November 2013).

College

Hearing Panel representative for CITE (January 2014 - December 2014).

Hearing Panel representative for CITE (along with Andrew Nichols and John Biros), Committee Member (September 2013 - December 2013).

University

Faculty Senate Committee-Student Conduct and Welfare committee, Committee Member (September 2014 - December 2014).

Faculty Senate committee (research, temporarily for fall 2012 semester), Committee Member (September 2012 - December 2012).

Professional

SAE International Journal of Passenger Cars-Mechanical Systems, Editor, Associate Editor (September 2014 - Present).
SAE International, New engine, sensor and actuator technical committee, Member (April 2014 - Present).


Advances in Automobile Engineering, Editorial Review Board Member, USA (October 2012 - Present).


SAE International Powertrains, Fuels and Lubricants Meeting, Program Organizer, USA (April 2009 - Present).

SAE Powertrain NVH Session in SAE Congress, Program Organizer, Detroit, MI, USA (January 2009 - Present).


Applied Physics Research (Journal), Editor, Associate Editor, Canadian Center of Science and Education, Canadian Center of Science and Education (October 2010 - 2014).

SAE Lubricants and Powertrain Systems Committee & TC127 US TAG Earthmoving Machinery, Committee Member, Detroit, MI, USA (May 2009 - March 2014).


Community


FLL teams (K-12 outreaches) in Huntington, Task Force Member, Huntington (February 2013 - November 2013).

FLL teams (K-12 outreaches) in Huntington, Volunteer and mentor to students’ activities, Huntington, WV, US (September 22, 2012 - December 8, 2012).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

Society of Automotive Engineers International, SAE International, Fellow (elected in Oct 2013), organizer/chair of Powertarin session of SAE congress, organizer/chair of SAE Int PFL global congress, SAE International is the leading professional society for Automotive Engineer. (March 2003 - Present).

American Society of Mechanical Engineers, ASME, Fellow (3% elected from members), ASME is the leading professional society for Mechanical Engineer. (April 1998 - Present).

Faculty Development Activities Attended

Workshop, "microstation".


CITE Faculty adviser training, CITE. (February 26, 2014).

Workshop, "SAE professional workshop series", SAE, 10 credit hours. (January 2013 - December 2013).


Tutorial, Safe driving training course, Huntington, WV, USA. (November 1, 2012).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors


International Lecturership of Beihang University, Beihang University (top 20 University in China), (June 2013).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Tracy M Christofore

Start Date at Marshall as a Faculty Member: December 1, 2007

Status: Tenured

Highest Degree Earned: Ph D Date Degree Received: 2005

Conferring Institution: Nova Southeastern University, Ft. Lauderdale, FL

Area of Degree Specialization: Information Science

Professional Registration/Licensure:
- CIPP/G - Information Privacy w/ Government Specialization
- CSM - Certified Scrum Master
- PMP - Project Management Professional
- SSGB - Six-Sigma Green Belt
- Wimba Live Classroom Certification
- Writing Across the Curriculum (WAC) re-Certification
- Quality Matters Rubric Update 2014
- Quality Matters Reviewer Certification
- Blackboard Collaborate Product Certification
- Writing Across the Curriculum Certification

Field of Registration/Licensure: Provides ability to teach Writing Intensive courses, , ,

Agency: International Association of Privacy Professionals, , Project Management Institute, , Wimba, Marshall, Quality Matters, Quality Matters, Blackboard, Marshall

Date Obtained, Expiration Date
- Obtained: January 1, 2015
- Obtained: November 30, 2014
- Obtained: January 1, 2013
- Obtained: January 1, 2012

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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### Course List

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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

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1) **Scholarship/Research**

**Presentations**

Research Currently in Progress

Christofero, Tracy M, "Female Innovators", On-Going, Scholarly.

Directed Student Learning and Research

White, B., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Developing a IT Disaster Recovery Plan that focused of the recovery of the financial Management System for The City of Huntington", In-Process. (January 2015 - Present).

Wood, B., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "West Virginia's Bureau for Public Health’s Implementation of Phase One of the Center for Disease Control's Environmental Public Health Tracking Network", In-Process. (January 2015 - Present).

Reed, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Filing & Technology Requirements for Securities Corporations", In-Process. (January 2015 - Present).

Bays, D. "., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Evolution of a Strategic Plan for One-Hour Heating and Air Conditioning", In-Process. (January 2015 - Present).

Cook, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Disaster Recovery Plan", In-Process. (January 2015 - Present).

Rinard, D., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "Are Concentrating Solar Collector Systems Reasible for Residentia Heating in West Virginia", In-Process. (May 2014 - Present).

Pham, L., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Guidelines for Creating a GIS Web Application for Huntington Area Development Council Technology", In-Process. (January 2014 - Present).

Algrain, O., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Improving Performance Quality of Ebenezer Medical Outreach Clinic.", In-Process. (January 2013 - Present).

Khedija, T., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Integration of a Human Resource Access Database Module in the XL-Print Company", In-Process. (February 2012 - Present).

Yaiche, G., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Business Plan for an Asian Restaurant in Tunisia", In-Process. (August 2011 - Present).

Nguyen, G., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "ANALYZING THE CHANGING OF RUNOFF FLOW IN THE TOWN OF BUFFALO, WEST VIRGINIA AND THE EFFECT OF THE FLOOD ON BUFFALO RESIDENTS", In-Process. (August 2011 - Present).

Jones, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Enterprise Business Process Deployment", In-Process. (August 2011 - Present).

Boubaker, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Business Recovery Plan Development for Medicalab Environment", In-Process. (August 2010 - Present).

Alhusain, B., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Saudi e-Commerce: Obstacles to Face and Progress to Achieve", Completed. (January 2015 - May 2015).
Gartin, E., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Recommendation of a Smarter Laboratory for Compliance Monitoring Laboratories, Inc.", Completed. (January 2015 - May 2015).

Shaker, G., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Strategic Plan for Implementing Construction Services in Saudi Arabia", Completed. (January 2015 - May 2015).

Blankenship, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Increasing Capacity analysis for the Acrysoft® Single-Piece Milling process", Completed. (January 2015 - May 2015).


Alkhaldi, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Transportation Technology and its Impact on Traffic Safety with Focus on Distracted Driving", Completed. (January 2015 - May 2015).

Nwosu, O., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Lean Methodology Awareness Training for Employees of Ultimate Treatment Center", Completed. (January 2015 - May 2015).

Chamling, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of Travel Nepal, Inc.", Completed. (January 2015 - May 2015).

Yalniz, T., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Designing and Developing FolioPlace.com, A Startup for Creating Online Portfolios", Completed. (January 2015 - May 2015).

Godby, E., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "MARCELLUS SHALE IMPACTS ON ENVIRONMENT, ECONOMY, AND EMERGENCY MANAGEMENT", Completed. (April 2015).

Frye, R., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "MANAGE BRIDGE PROJECT USING PMI", Completed. (April 2015).

Lekekarat, W., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Marketing Strategies in the new Millennium", Completed. (April 2015).

Chen, Z., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Strategic plan for the Shanghai Electromechanical Company", Completed. (April 2015).

Petrie, A., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Analysis of Municipal Water Facilities and Associated Costs", Completed. (December 2014).

McCray, N., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "Hydraulic Fracturing and Wastewater: The Potential to Contaminate Water Sources", Completed. (December 2014).

Laishley, T., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "A Feasibility Study of Retro-fitting Green Roofs on an Existing Structure", Completed. (December 2014).
Purkey, L., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Feasibility Study for DIYOU.com", Completed. (August 2014 - December 2014).

Smith, P., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Point-of-Sale Web Application with an Inventory and Finance Backend", Completed. (August 2014 - December 2014).


White, B., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Lessons Learned: Development and Implementation of the Process", Completed. (May 2014 - August 2014).


Lambert, J., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Company Orientation and Mentoring Programs", Completed. (May 2014 - August 2014).


Welch, M., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Civil Engineering Design Estimation", Completed. (May 2014 - August 2014).

Moore, N., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Line Balacing and Standardized Work", Completed. (May 2014 - August 2014).

Stotts, T., Research, Master's Thesis Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Pickering Associates Facilities Plan - Parkersburg Campus", Completed. (May 2014 - August 2014).

Rose, V., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "A Tablet-based Measurement Tool for Individual Manufacturing Environments", Completed. (May 2014 - August 2014).

Rose, V., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (May 2014 - August 2014).

Campbell, Z., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Lessons Learned at the Next Level - Implementing a Project Management Procedure", Completed. (May 2014 - August 2014).

Ball, B., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (May 2014).

Wolfe, E., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Adoption of Continuous Integration Practices to Ensure Quality in Information Technology Operations and Application Delivery.", Completed. (January 2014 - May 2014).

Haun, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Developing a Strategic Plan for EHR Selection and Migration at MarshallHealth", Completed. (January 2014 - May 2014).
McClain, L., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of the McJunkin Red Man Corporation Merger & Acquisition Playbook", Completed. (January 2014 - May 2014).

Schwartz, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "AEP High Volume Call Answering Process Change". (January 2014 - May 2014).


Chard, P., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Recommendations for the Management and Maintenance of the West Virginia Statewide Interoperable Radio Network (SIRN)", Completed. (January 2014 - May 2014).

Fish, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Communications Quick Reference Guide (CQRG) - West Virginia Army National Guard", Completed. (January 2014 - May 2014).

Williams, N., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "the PUMA of U-13-83 (Mine No. 7) and the interconnected works below and adjacent to the mine", Completed. (January 2014 - May 2014).

Akkad, N., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 2014 - May 2014).

Straley, S., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, Completed. (January 2014 - May 2014).

Gooch, J., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "A Preliminary Investigation of Trace Elements and Semi-Volatile Organic Compounds from Active Weapon Ranges on the Cheat River and Surrounding Ecosystems, Camp Dawson, Kingwood, West Virginia", Completed. (September 2013 - December 2013).


Cavander, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours. (December 6, 2013).

Quinn, J., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, Completed. (December 6, 2013).

Gooch, J., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours. (November 19, 2013).

McClellan, A., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "5-Year Strategic Plan for Diesel Technology A.A.S. Degree at Bridgemont Community & Technical College", Completed. (October 2, 2013).

Dial, M., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (May 2013).
Mickel, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Manual to Assist Prospective Entrepreneurs Through the Business Development Process.", Completed. (January 2013 - May 2013).

Benhajji, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Strategic Plan for E.C.I. (Engineering Chemical Industry) in Tunisia.", Completed. (January 2013 - May 2013).

Hughes, J., Research, Master's Thesis Committee Member, Information Systems Department, TE, 699, 3 credit hours, "Brown's Excavating & Demolition Record Management System". (January 2013 - May 2013).

Chopade, A., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Centralization of Data in Marshall University's H.E.L.P. Center", Completed. (August 2012 - December 2012).

Udoh, A., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Portfolio Detailing Optimization Processes and Product Quality on Optic Lens Characterizations, Design, and Manufacturing Challenge.", Completed. (August 2012 - December 2012).

Fernandes, C., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Application of the PMBOK Methodology for IT Projects", Completed. (August 2012 - December 2012).

Kendzierski, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "H.E.L.P Program Student/Tutor Database Implementation", Completed. (August 2012 - December 2012).


Khairi, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Recreation Center Business Plan", Completed. (August 2012 - December 2012).

El Mir, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Recommendation of an e-Procurement Solution for International Engineering Trading and Consultancy.", Completed. (August 2012 - December 2012).

Gueddich, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of a Strategic Plan for a Basta Bar", Completed. (August 2012 - December 2012).

Stuart, R., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Proposal and Execution Plan for Contract Operation of an Environmental Sample Collection Center.", Completed. (August 2012 - December 2012).

Chamli, W., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Pillow Tech", Completed. (August 2012 - December 2012).

Amara, W., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "WebRadar's Preliminary Strategic Plan", Completed. (August 2012 - December 2012).

Tran, V., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "ANALYSIS OF THE ADOPTION OF AN ELECTRONIC HEALTH RECORD DATABASE IN AMBULATORY CARE", Completed. (January 2011 - October 2012).

Al Jumaili, A., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours,
"Project Management in War and Conflict Areas", Completed. (May 2012).

Mukiri, G., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "Using GIS to Investigate the Spatial Relationship between Autism and the Coal Industry in West Virginia.", Completed. (May 2012).

Chen, H., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Software for Calculating Human Health Risks from Chemical Exposure.", Completed. (May 2012).

Gray, J., Research, Master's Thesis Committee Member, Information Systems Department, TE, 699, 3 credit hours, "American Red Cross Case Management System", Completed. (May 2012).

Martin, R., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "Coal Bed Methane in the Appalachian Basin: A Brief Overview", Completed. (May 2012).

Kheetan, S., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "Forecasting Grain Barge Demand on U.S. Waterways Using Time Series Analysis", Completed. (May 2012).

Wright, S., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, "The New River Gorge Bridge", Completed. (May 2012).

Weaver, T., Research, Master's Thesis Committee Member, Information Systems Department, TE, 699, 3 credit hours, "Developing a System for a Food Bank", Completed. (May 2012).

Hancock, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Digital Scientific Technical Manuals", Completed. (January 2012 - May 2012).

Walker, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Business Process Automation in a Healthcare Organization", Completed. (January 2012 - May 2012).

Aksoy, E., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Develop a Business Plan to Open an Organic Toy Store", Completed. (January 2012 - May 2012).

Pitchford, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Putnam Country Schools move to a Cloud Environment Utilizing Virtualization.", Completed. (January 2012 - May 2012).

Angel, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Can Tablets Replace Laptops in the Office Environment?", Completed. (January 2012 - May 2012).

Lipscomb, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Disaster Recovery Planning for the West Virginia State Tax Department Gentax Processing System", Completed. (January 2012 - May 2012).


Mellace, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "The West Virginia State Bar Capstone Project", Completed. (January 2012 - May 2012).

Buckner, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "CAMC Teays Valley Hospital Emergency Department Patient Wait Time Project Analysis", Completed. (January 2012 - May 2012).
Nguyen, T., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Research and Analysis of Technology Based Tools for Smoking Cessation:”, Completed. (January 2012 - May 2012).

Khedkar, V., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Graduate Assistant Employment Web site”, Completed. (January 2012 - May 2012).

Khouja, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Stick-It: Development of a Strategic Plan”, Completed. (August 2011 - May 2012).

Khouja, Y., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Integrate Automated Interactive Voice Systems Into Tunisiana”, Completed. (August 2011 - May 2012).

Nguyen, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "HOSPITAL INFORMATION SYSTEMS: WITH IMPLEMENTATION OF THE HL7 STANDARD”, Completed. (May 2010 - May 2012).

Dunn, R., Research, Master's Thesis Committee Member, Information Systems Department, TE, 699, 3 credit hours, "Oil Rig Inspection & Reporting Process Analysis & Software Design”, Completed. (April 2012).

Adkins, C., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Storage Infrastructure Modernization:Deploying 3PAR's Autonomic Storage Technologies within the Hewlett Packard Enterprise Services Data Center to Improve on Efficiencies of Storage Provisioning and Provisioned Storage Performance”, Completed. (December 9, 2011).

Cunningham, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Technical Portfolio of Vehicle Components and Descriptions to Detail the Design of an Underground Mine Rescue and Escape Vehicle”, Completed. (December 9, 2011).

Ali-Kareem, A., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Creation of a Drinko Library Web Application”, Completed. (December 7, 2011).

Aouni, A., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Recommendation for a Quality Methodology to the Société Industrielle de Fabrication de Faisceaux & Systèmes Electriques (SIE)”, Completed. (December 7, 2011).

Cox, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "SAFEGUARDING THE HUMAN ELEMENT IN INFORMATION SECURITY WITH AN INFORMATION SECURITY AWARENESS AND TRAINING PLAN IN AN IT CONSOLIDATED STATE GOVERNMENT”, Completed. (December 7, 2011).


Shanklin, M., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "A Feasibility Study for Developing a Data Dictionary for the West Virginia Department of Education”, Completed. (November 9, 2011).

Hancock, D., Research, Master's Thesis Committee Member, Environmental Science Department, TE, 699, 3 credit hours, "School Air Toxics”, Completed. (November 1, 2011).

Pitchford, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit

Kitiwattanabumrung, K., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Utilizing E-business at Ocean King Transportation Co., Ltd.", Completed. (October 5, 2011).

Hicks, B., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "E-business at Ocean King Transportation Co., Ltd.", Completed. (October 5, 2011).

Moreno, G., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Implementing a Server Virtualization Impact on Database Servers", Completed. (May 6, 2011).

Hilger, L., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Utilization of Technology Among Three Retail Pharmacy Chains: A Comparison", Completed. (April 27, 2011).

Slate, N., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Worship in the Cloud: Determining the feasibility of implementing Web 2.0 applications for a community church", Completed. (April 27, 2011).

Henson, R., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Development of an Information Security Policy for J.H. Fletcher & Co.", Completed. (April 19, 2011).

Jain, V., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Integration of OAM with OAAM", Completed. (February 23, 2011).

Emrick, R., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Architecting a Prototype Enterprise GIS for Public Safety Data Coordination in Kanawha County", Completed. (December 7, 2010).

Cao, V., Research, Master's Thesis Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (December 7, 2010).

Elliott, D., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Ensuring Data Encryption for Portable Devices", Completed. (May 6, 2011).

Stover, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "The Feasibility of Virtualization at West Virginia Mutual Insurance Company", Completed. (May 4, 2011).

Adkins, R., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Comparison of the Advantages and Disadvantages of E-Prescribing in the Future of Pharmacy", Completed. (May 4, 2011).

Hatten, S., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Developing a Security Policy for Huntington Area Habitat for Humanity", Completed. (April 27, 2011).
hours, "DATA MINING IN HIGHER EDUCATION", Completed. (December 3, 2010).

Bundu, H., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Developing and Managing Information Security Strategies in Sierra Leone", Completed. (December 3, 2010).

Fraser, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Evaluating the Use of Traffic Volume Data in Determining the Allocation of Emergency Medical Services", Completed. (December 3, 2010).

Nguyen, T., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Developing a Recommendation for Collaboration Software at Somotsoft: Selecting the Right Solution", Completed. (December 3, 2010).

Inghram, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Evaluation of Filtration, Treatment Technologies and Environmental Concerns for the Putnam Public Service District Infrastructure Investment in the Water Treatment Plant", Completed. (November 1, 2010).

AlHarbi, H., Research, Master's Thesis Committee Member, Information Systems Department, TE, 699, 3 credit hours, "Saudi Counseling & Admission Services (SCAS)”, Completed. (August 2010).

Ramachandra, J., Research, Master's Thesis Committee Chair, Technology Management Department, TM, 699, 3 credit hours, "Implementing an Integrated Business Intelligence Solution at the WV DHHR Family and Children Tracking System", Completed. (August 2009 - May 2010).

2) Service

College
CITE Curriculum Committee, Committee Member (2014 - Present).

IT Advisory Committee, Committee Member (2009 - Present).

CITE Graduate Programs Booth, "manned" the booth (October 16, 2013).

University
Strategic Enrollment Planning, Committee Member (April 2015 - Present).

20/20 Academic e-course Rapid Response Team, Committee Member (January 2015 - Present).

HLC Accreditation Assurance, Committee Member (June 9, 2014 - Present).

Multidisciplinary & Interdisciplinary Degree Committee, Committee Chair (April 2014 - Present).

Graduate Council Executive Committee, Committee Chair (January 2014 - Present).

Winter Commencement Marshal, Marshal (December 2013 - Present).

Budget Work Group, Committee Member (October 25, 2013 - Present).

20/20 Vision Development Team, Committee Chair (October 14, 2013 - Present).

Graduate Council Subcommittee on Graduate Student Rights and Responsibilities (GCSGSRR), Committee Chair (August 2013 - Present).
Entrepreneurship Advisory Committee, Committee Member (August 29, 2011 - Present).

Strategic Enrollment Planning Council, Committee Member (June 2011 - Present).

Faculty Senate Executive Committee, Committee Member (August 23, 2010 - Present).

Graduate Council, Chairperson (August 23, 2010 - Present).

Health Informatics Degree Committee, Committee Member (2009 - Present).

Wimba Users Group, Committee Member (2009 - Present).

Faculty Senate, University Senate Service (2008 - Present).

Master Syllabus, Committee Member (October 18, 2011 - 2012).

ad hoc Promotion & Tenure Committee, Committee Member (May 2010 - 2012).

Academic Affairs Retreat and Follow-up, Committee Member (August 8, 2011 - 2011).

South Charleston Open House, Campus Open House (November 12, 2011).

Graduate Admissions Counselor Search, Committee Member (2010).

Faculty Personnel, Committee Member (2009 - 2010).

Faculty Senate Academic Planning, Committee Chair (2009 - 2010).

Graduate Council Curriculum, Committee Chair (2008 - 2010).


Community

Mt. Olive Correctional Facility IT Advisory Board, Board Member, Mt. Olive, WV, US (2012 - Present).

WV eMentoring, Member, WV, USA (January 21, 2011 - Present).

WV HIMSS, Committee Chair (2009 - Present).

WV Social Studies Fair, Judge, Charleston, WV, USA (2011).


3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

International Association for Management of Technology, IAMOT, Technology Management Educators. (2008 - Present).
Faculty Development Activities Attended


Continuing Education Program, "Quality Matters Improving your Online Course", HEPC, South Charleston campus, WV. (September 3, 2014).

Workshop, "CITE ABET Workshop", Huntington. (January 8, 2014).


Conference Attendance, "Cyber Security Conference". (October 2, 2013).


Workshop, "Research Commercialization Introductory Course". (February 27, 2013 - April 9, 2013).


Workshop, "Blackboard Collaborate Certification", Blackboard / CTL, online. (September 8, 2012 - September 12, 2012).


Workshop, "Rubrics Development Workshop", Center for Teaching and Learning, Huntington Campus. (April 4, 2012).

Workshop, "Intro to the Rubric Tool in the new MUOnLine", Monica Brooks / Mary Beth Reynolds. (December 15, 2011).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Iyad A. Hijazi
Rank: Assistant Professor

Start Date at Marshall as a Faculty Member: August 17, 2013

Status: Probationary

Highest Degree Earned: Ph D Date Degree Received: 2010

Conferring Institution: New Mexico State University, Las Cruces, NM

Area of Degree Specialization: Mechanical Engineering

Professional Registration/Licensure:

Field of Registration /Licensure:

Agency:

Date Obtained, Expiration Date:

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Term/Year</th>
<th>Course</th>
<th>Title</th>
<th>Enrolled</th>
<th>% Respon</th>
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<td>ENGR 111</td>
<td>Engineering Computations</td>
<td>25 100%</td>
<td>100</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>ENGR 102</td>
<td>Introduction to CAD</td>
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<td>The Engineering Profession</td>
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<td>ENGR 215</td>
<td>Engineering Materials</td>
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<td>100</td>
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<td>ENGR 104</td>
<td>The Engineering Profession</td>
<td>34 100%</td>
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<td>Fall 2014</td>
<td>ENGR 104</td>
<td>The Engineering Profession</td>
<td>28 100%</td>
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<td>ENGR 104</td>
<td>The Engineering Profession</td>
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<td>Spring 2014</td>
<td>ENGR 111</td>
<td>Engineering Computations</td>
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<td>Introduction to CAD</td>
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</table>
1) Scholarship/Research

Contracts, Grants and Sponsored Research


Intellectual Contributions


Presentations


Research Currently in Progress


2) Service

Department

Mechanical Engineering Curriculum, Committee Member, (August 17, 2014 - December 17, 2014).

ME Search Committee, Committee Member, (January 27, 2014 - July 31, 2014).

ABET Assessment, Committee Member, (August 17, 2013 - December 31, 2013).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or
participated. List any offices you hold in professional organizations.

**Professional Memberships**

American Physical Society, APS, The American Physical Society (www.aps.org) is a non-profit membership organization working to advance and diffuse the knowledge of physics through its outstanding research journals, scientific meetings, and education, outreach, advocacy and international activities. APS represents over 50,000 members, including physicists in academia, national laboratories and industry in the United States and throughout the world. Society offices are located in College Park, MD (Headquarters), Ridge, NY, and Washington, DC.

American Society of Mechanical Engineers, ASME, ASME is a not-for-profit membership organization that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines, toward a goal of helping the global engineering community develop solutions to benefit lives and livelihoods. Founded in 1880 by a small group of leading industrialists, ASME has grown through the decades to include more than 130,000 members in 158 countries. Thirty-thousand of these members are students.

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Professor Jeffrey T Huffman  Rank: Assistant Professor

Start Date at Marshall as a Faculty Member: January 1, 2011

Status: Probationary

Highest Degree Earned: MS Date Degree Received: 1990

Conferring Institution: Virginia Polytechnic Institute and State University, Blacksburg, Virginia

Area of Degree Specialization: Civil Engineering, Geotechnical

Professional Registration/Licensure:
- Professional Engineering License - NC
- Professional Engineering License - OH
- Professional Engineering License - KY
- Professional Engineering License - WV
- Professional Engineering License - PA

Field of Registration/Licensure:
- Professional engineering license
- Professional engineering license
- Professional engineering license
- Professional engineering license
- Professional engineering license

Agency: North Carolina Board of Examiners for Engineers and Surveyors, State Board of Registration for Professional Engineers and Surveyors, Kentucky State Board of Licensure for Professional Engineers and Land Surveyors, West Virginia State Board of Registration for Professional Engineers, Commonwealth of PA Department of State Bureau of Professional and Occupational Affairs

Date Obtained, Expiration Date:
- Obtained: June 20, 2008
- Obtained: April 18, 2007
- Obtained: February 27, 2007
- Obtained: June 2, 2005
- Obtained: August 1, 1994

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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<thead>
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<th>Title</th>
<th>Enrolled</th>
<th>% Respon</th>
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<td>31 100%</td>
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<td>Civil Engineer Materials</td>
<td>28 100%</td>
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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research
Contracts, Grants and Sponsored Research


Huffman, J. T. (Principal), Sponsored Research, "Measurement of bearing pressures beneath mechanically stabilized earth walls (Short listed for consideration)(Not Funded).", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 1, 2014 - December 31, 2014).

Huffman, J. T. (Co-Principal), Chen, G. (Co-Principal), Sponsored Research, "Measurement of lateral earth pressures behind fully integral bridge abutments by measuring nonlinear vibration response to vehicle loads (Not Funded).", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 1, 2014 - December 31, 2014).

Huffman, J. T. (Co-Principal), Chen, G. (Co-Principal), Sponsored Research, "Detection of Bridge Damages Using Nonlinear Vibration-Based Health Monitoring (Not Funded)", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (October 31, 2012 - December 31, 2013).

Huffman, J. T. (Co-Principal), Zatar, W. A. (Co-Principal), Sponsored Research, "Deployment of High-Performance Concrete Bridge Overlays in West Virginia", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31, 2011).

Huffman, J. T. (Co-Principal), Zatar, W. A. E. M. (Co-Principal), Sponsored Research, "Development of Material Specification for Implementation of High-Performance Concrete for Bridge Decks", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31,
Huffman, J. T. (Principal), Sponsored Research, "Measurement of bearing pressures beneath mechanically stabilized earth walls.", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31, 2011).

Huffman, J. T. (Principal), Sponsored Research, "Measurement of lateral earth pressure behind fully integral bridge abutments with various wing wall configurations.", West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31, 2011).

Intellectual Contributions

Howe, S., Huffman, J. T. (2014). CDHub 2.0 (WWW.CDHub2.ORG) Internet Website.


Presentations


Huffman, J. T. (Panelist), Other, Capstone Design Conference 2014, Capstone Design Conference, Columbus, Ohio, "Invited Panelist for panel on "Project Definition - Panel Discussion"", Panel, Academic, National, Invited. (June 2, 2014).


Wahjudi, P. (Presenter & Author), Huffman, J. T. (Presenter & Author), Pierce, C. (Presenter & Author), Oral Presentation, EFFECTs presentation to Fairmont State University, Fairmont State University, Fairmont, WV, "EFFECT in Engineering and Computer Science", Workshop, Academic, Local, Invited. (August 16, 2013).

Wait, I. W. (Presenter & Author), Anderson, C. T. (Author Only), Huffman, J. T. (Author Only), Paper, ASEE Annual Conference & Exposition, American Society of Engineering Education, Atlanta, Georgia, "Fostering critical thinking through a service-learning, combined sewer analysis project in an undergraduate course in hydrologic engineering",

Huffman, J. T. (Author Only), Other, 120th Annual Conference & Exposition, American Society of Engineering Educators, Atlanta, Georgia, "A Capstone Design Course Pedagogy to Prepare Civil Engineering Students for Their First Engineering Position (Abstract Accepted)", Conference, Academic, National, Accepted. (September 21, 2012).


Research Currently in Progress


Huffman, Jeffery T, Dale Miller, George M. Filz, PhD, P.E., "Strength and Deformation Properties of Soil-Cement.", Writing Results, Scholarly.

Huffman, Jeffery T, Chen, Gang, "Utilizing Nonlinear Vibrations to Evaluate Lateral Earth Pressures Against Concrete Structures", On-Going, Scholarly.

Huffman, Jeffery T, Chen, Gang, "Utilizing Nonlinear Vibrations to Evaluate Mine Roof Bolt Bonding", On-Going, Scholarly.

Directed Student Learning and Research


Walters, A., Learning, Comprehensive Master's Degree Project, Engineering Department, TE, 699, "Reworking MAPP to Fit Smaller Projects", Completed. (December 9, 2014).


Chappell, D., Learning, Comprehensive Master's Degree Project, Engineering Department, TE, 699, "Planning and Design of an Auxiliary Turn Lane: A Case Study in Ona, West Virginia.", Completed. (February 1, 2013 - August 10, 2013).

Caldwell, J., Gaum, R., Learning, Supervised Teaching Activity, Computer Science Department, CS, 490, "Creation of the Inventory College of Information Technology and Engineering (IN-CITE) Project for Real-Time Management of Laboratory Equipment", In-Process. (September 5, 2012 - April 26, 2013).

2) Service

Department

SAME-ASCE Student Chapter, Faculty Advisor, (May 1, 2011 - Present).

Scholarship Committee, Committee Member, (April 1, 2011 - Present).

BSE Advisory Board, Attendee, Meeting, (March 6, 2011 - Present).

BSE Curriculum Committee, Committee Member, (January 7, 2011 - Present).


Honors Convocation, Division Representative at Honors Convocation, (May 2, 2014).

Senior Assessment, Coordinator of Senior Assessment Activities, (February 2014 - April 2014).


Structural Engineering Faculty Search Committee, Committee Member, (October 9, 2012 - March 1, 2013).

Merit Badge College - Theta Tau, Faculty Advisor, (February 1, 2013 - February 16, 2013).


Laboratory Technician Search Committee, Committee Member, (September 3, 2012 - November 17, 2012).

Fletcher Chair Search Committee, Committee Member, (December 7, 2011 - August 10, 2012).

ASCE Virginias Conference, Faculty Advisor, (March 29, 2012 - April 1, 2012).


Theta Tau Fraternity, Faculty Advisor, (October 3, 2011 - December 31, 2011).

Geological Engineering Emphasis Exploration Committee, Committee Member, (August 1, 2011 - December 15, 2011).

Internship Coordinator, Committee Chair, (April 1, 2011 - December 15, 2011).

CITE Homecoming Parade, Advised overall design and towed the CITE float in the homecoming parade., (October 13, 2011).


Fundamental of Engineering Review Session, Provided FE Review Session on Geotechnical Engineering, (February 17, 2011).

SAME - Engineering Career Day, Committee Member, (February 8, 2011).

Engineers Without Borders Student Chapter, Faculty Advisor, (March 1, 2009 - January 24, 2011).

**College**

SAME - Engineering Career Day 2015, Committee Member (December 1, 2014 - Present).


Freshman Summer Orientation, Faculty Advisor (June 2014 - August 2014).

SAME - Engineering Career Day 2014, Committee Member (December 8, 2013 - February 20, 2014).

Outreach Hurricane High School, Outreach Presentation (November 20, 2013).

Outreach Hurricane High School, Outreach Presentation (November 15, 2013).

Freshman Summer Orientation, Faculty Advisor (May 18, 2013 - August 2, 2013).

West Point Bridge Design Contest, Co-Coordinator for WPB Design Contest (May 17, 2013 - May 18, 2013).

Outreach - Discovering Engineering Day, Participated in Outreach Activity (February 23, 2013).

SAME - Engineering Career Day 2013, Committee Member (October 8, 2012 - February 21, 2013).


Freshman Summer Orientation, Faculty Advisor (June 19, 2012 - August 3, 2012).

West Point Bridge Design Contest, Co-Coordinator for WPB Design Contest (May 11, 2012 - May 12, 2012).

Outreach Poca High School, Outreach Presentation (March 16, 2012).

Outreach - Discovering Engineering Day, Participated in Outreach Activity (February 25, 2012).

Recruitment, CITE and BSE recruitment (March 22, 2011 - December 20, 2011).

Summer Orientation, Faculty Advisor (June 24, 2011 - August 5, 2011).

Exploring Engineering: Academy of Excellence, Committee Member (May 1, 2011 - July 8, 2011).

**University**

Revising University Academic Appeal Policy, Chairman of subcommittee (November 22, 2013 - Present).

Academic Appeals Board, Committee Member (September 5, 2011 - Present).
Budget and Academic Policy Committee, Committee Member (September 5, 2011 - Present).

Professional

American Society of Civil Engineers, Officer, President/Elect/Past, Huntington, West Virginia (September 28, 2013 - Present).

American Society of Civil Engineers, Officer, Vice President, Huntington, West Virginia (September 28, 2013 - Present).

Society of American Military Engineers, Director of Professional Organization, Huntington, West Virginia (January 12, 2010 - Present).

American Society of Civil Engineers, Officer, Treasurer, Huntington, West Virginia (September 16, 2011 - September 28, 2013).

Community

Cheyenne Valley Homeowner Association, Officer, President/Elect/Past, Teays Valley, West Virginia (June 1, 2008 - June 1, 2013).

Project Lead The Way Steering Committee, Committee Member, Wayne, West Virginia (December 20, 2011).

Putnam County Schools Advisory Committee, Committee Member, Eleanor, West Virginia (March 31, 2011).

Real World Design Challenge, Presentation Judge, Huntington, West Virginia (February 12, 2011).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

Deep Foundation Institute, DFI, Member, Deep Foundation Institute promotes the technical aspects of deep foundation in practice. DFI hold numerous technical conference, publishes a journal, and a bi-monthly magazine. (December 1, 2014 - Present).

American Society of Civil Engineers, ASCE, President, President of ASCE West Virginia Section. Responsible for operation of WV Section meeting and oversight of five branches within the State of West Virginia. (September 2, 2014 - Present).


American Society of Civil Engineers, ASCE, Member, ASCE member. Attended monthly, quarterly and annual meetings of the society. (December 1, 1991 - Present).
American Society of Civil Engineers, ASCE, Vice President, Vice President of ASCE West Virginia Section. Responsible for operation of WV Section meetings and WV Section participation in the WVEXPO. (September 28, 2013 - September 27, 2014).

American Society of Civil Engineers, ASCE, Treasurer, Treasurer of ASCE West Virginia Section. Responsible for financial operation of WV Section and oversight of five branches within the State of West Virginia. (September 16, 2011 - September 28, 2013).

Faculty Development Activities Attended


Conference Attendance, "WV EXPO", Contractors Association of West Virginia, American Institute of Architects - WV, WV Society of Professional Engineers, Charleston, West Virginia, 0 credit hours. (March 26, 2014 - March 27, 2014).


Conference Attendance, "WV EXPO", Contractors Association of West Virginia, American Institute of Architects - WV, WV Society of Professional Engineers, Charleston, West Virginia, 0 credit hours. (March 20, 2013 - March 21, 2013).

Conference Attendance, "Center for Geotechnical Research and Practice Annual Lecture Program", VPI & SU (Virginia Tech), Blacksburg, Virginia, 0 credit hours. (February 28, 2013).


Professional Society Meeting, "ASCE Quarterly Meeting", American Society of Civil Engineers, Montgomery, West Virginia, 0 credit hours. (November 15, 2012).

Professional Society Meeting, "ASCE Annual Meeting", American Society of Civil Engineers, Hawk's Nest, West Virginia, 0 credit hours. (September 28, 2012 - September 30, 2012).

Self-Study Program, "Independent Applying the QM Rubric", Marshall University, Center for Teaching & Learning, Huntington, WV. (August 14, 2012 - September 13, 2012).


credit hours. (May 14, 2012 - May 17, 2012).


Professional Society Meeting, "ASCE Quarterly Meeting", American Society of Civil Engineers, Huntington, West Virginia, 0 credit hours. (January 26, 2012).

Workshop, "ASCE Workshop for Student Chapter Leaders", American Society of Civil Engineers, Nashville, Tennessee, 0 credit hours. (January 20, 2012 - January 22, 2012).

Workshop, "SAME Workshop for Student Chapter Leaders", Society of American Military Engineers, Detroit, Michigan, 0 credit hours. (December 9, 2011 - December 10, 2011).

Professional Society Meeting, "ASCE Quarterly Meeting", American Society of Civil Engineers, Montgomery, West Virginia, 0 credit hours. (November 17, 2011).

Seminar, "ASCE Section & Branch Accounting and Financial Webinar", American Society of Civil Engineers, Huntington, West Virginia, 0 credit hours. (November 15, 2011).

Professional Society Meeting, "ASCE Annual Meeting", American Society of Civil Engineers, Snowshoe, West Virginia, 0 credit hours. (September 16, 2011 - September 18, 2011).


Professional Society Meeting, "ASCE Quarterly Meeting", American Society of Civil Engineers, Charleston, West Virginia, 0 credit hours. (March 23, 2011).

Seminar, "Ethics in Engineering", American Society of Civil Engineers, Huntington, West Virginia, 0 credit hours. (February 23, 2011).


Professional Society Meeting, "ASCE Quarterly Meeting", American Society of Civil Engineers, Huntington, West Virginia, 0 credit hours. (January 27, 2011).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

Organization Advisor of the Year (Marshall University), SAME-ASCE Student Chapter, (May 2, 2014).

Nominated for Pickens Queen Teacher Award, Marshall University Center for Teaching and Learning, (August 20, 2012).

Student Chapter Leader of the Year, Society of American Military Engineers, (December 3, 2011).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Eldon Ronald Larsen  Rank: Professor

Start Date at Marshall as a Faculty Member: August 17, 1999

Status: Tenured

Highest Degree Earned: Ph D  Date Degree Received: 1983

Conferring Institution: University of California at Berkeley, Berkeley, California

Area of Degree Specialization: Chemical Engineering

Professional Registration/Licensure: Certified Project Management Professional

Field of Registration/Licensure: Certified project management professionals must meet educational and practice experience requirements, as well as pass the PMP certification exam.

Agency: Project Management Institute

Date Obtained, Expiration Date Obtained: September 20, 2005, Expired: December 31, 2013

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Term/Year</th>
<th>Course</th>
<th>Title</th>
<th>Enrolled</th>
<th>% Respon</th>
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<td>100</td>
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<td>Summer 2014</td>
<td>TE 699</td>
<td>Comprehensive Project</td>
<td>12 100%</td>
<td>100</td>
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<tr>
<td>Summer 2014</td>
<td>EM 620</td>
<td>Mgt Tech HR &amp; Orgs</td>
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<tr>
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<td>Grade</td>
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<tr>
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<td>Mgt Tech HR &amp; Orgs</td>
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<td>100%</td>
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<td>Mgt Tech HR &amp; Orgs</td>
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</table>

**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

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1) Scholarship/Research

**Contracts, Grants and Sponsored Research**


Larsen, E. R., Grant, "Quinlan Grant", Quinlan Endowment, Marshall University, $500.00. (November 7, 2010 - November 12, 2010).

**Intellectual Contributions**


**Presentations**


Larsen, E. R. (Leader), Poddar, S. (Panelist), Hipple, J. (Panelist), Cramer, J. (Panelist), Knowles, R. (Panelist), Oral Presentation, 2014 Spring Meeting of the American Institute of Chemical Engineers, American Institute of Chemical Engineers, Atlanta, GA, USA, "Panel Discussion--What Do You Want to Know About Project Management?",

Research Currently in Progress


Directed Student Learning and Research

Morgan, G., Research, Comprehensive Project Assessment Committee, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2014 - December 2014).


Purkey, L., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, "Development of a Feasibility Study for Do-It Yourself Online University", Completed. (August 2014 - December 2014).


Walters, A., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Reworking MAPP to Fit Smaller Projects", Completed. (August 2014 - December 2014).


Pham, L., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, "Creating a GIS Web Application for Huntington Area Development Council Technology", Completed. (January 2014 - May 2014).

Shi, T., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, Completed. (January 2014 - May 2014).


Ball, B., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Improved Management of Aging Local Protection Projects where River Bank Erosion is Outside of the Maintenances Zone", Completed. (January 2014 - May 2014).


Sizemore, J., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Mobile Digital Sensing as a Highway and Asset Management Tool", Completed. (January 2014 - May 2014).

Lambert, J., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Prerequisites for Successful Company Orientation and Mentoring Programs: Identification and Improvement of Company Culture and Structure", Completed. (January 2014 - May 2014).


Welch, M., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Civil Engineering Design Estimation", Completed. (January 2014 - May 2014).

Moore, N., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Line Balancing and Standardized Work", Completed. (January 2014 - May 2014).

Akkad, N., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Guide to Design Build Procurement", Completed. (January 2014 - May 2014).


Rose, V., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "High Homogenization Project", Completed. (January 2014 - May 2014).

Campbell, Z., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Lessons Learned at the Next Level--Implementing a Project Management Protocol", Completed. (January 2014 - May 2014).

Cyr, I., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (August 2013 - December 2013).


Bessler, D., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (January 2013 - May 2013).

James, W., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (January 2013 - May 2013).

Dial, M., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Comprehensive Project--Precision Survey Solutions", Completed. (January 2013 - May 2013).

Chappell, D., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, "Comprehensive Project", Completed. (August 2012 - May 2013).

El Mir, M., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Stuart, R., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Chamil, W., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Amara, W., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Al Jumaili, A., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - December 14, 2012).

Compston, R., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (May 2012 - August 2012).

Lipscomb, J., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, "Disaster Recovery Planning for the West Virginia State Tax Department Gentax Processing System --", Completed. (January 2012 - May 2012).

Ume, N., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 2012 - May 2012).

Nguyen, T., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, "Research and Analysis of Technology Based Tools for Smoking Cessation: A Survey of Phone and Internet Based Resources", Completed. (January 2012 - May 2012).

Kheetan, S., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, "Forecasting Grain Barge Demand", Completed. (January 1, 2012 - May 10, 2012).


Gray, J., Research, Comprehensive Project Committee member, Information Systems Department, TE, 699, 3 credit hours, "Casework Management System", Completed. (January 1, 2012 - May 10, 2012).

Angel, J., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Can Tablets Replace Laptops in the Office Environment?", Completed. (January 1, 2012 - May 10, 2012).

Grose, M., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).

Murphy, M., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).

Rose, S., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).


Pham, H., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, "Business plan of the finishing and insulation material manufacture company", Completed. (January 2011 - May 2011).


Nguyen, T., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (January 2011 - May 2011).

McCallister, J., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Raleigh County Solid Waste Authority: Landfill Design, Construction and Operation", Completed. (January 2011 - May 2011).

Herholdt, K., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Ensuring Data Encryption for Portable Devices at Marshall University", Completed. (May 6, 2011).

Dokouzov, P., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Server Virtualization Impact on Database Servers", Completed. (May 6, 2011).
Adkins, R., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Comparison of the Advantages and Disadvantages of E-Prescribing in the Future of Pharmacy", Completed. (May 4, 2011).

Hatten, S., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Developing a Security Policy for Huntington Area Habitat for Humanity", Completed. (May 4, 2011).

Carpenter, A., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Raleigh County Solid Waste Authority: Landfill Design, Construction and Operation", Completed. (May 2, 2011).

Hilger, L., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Utilization of Technology Among Three Retail Pharmacy Chains: A Comparison", Completed. (April 27, 2011).

Slate, N., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Worship in the Cloud: Determining the Feasibility of Implementing Web 2.0 Applications for a Community Church", Completed. (April 27, 2011).

Selbe, E., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, Completed. (April 18, 2011).

Leung, T., Learning, Master's Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, "Air Quality Regulations A Look at Air Quality Concerns and Controls on a Global Scale", Completed. (January 18, 2011).

Collins, C., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

Ferrell, S., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

Cao, V., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

2) Service

Department

Program Coordinator for the Master of Science in Engineering Degree Program (MSE), Program Coordinator, (January 2005 - Present).

College

CITE Personnel Committee, Committee Member (October 2014 - Present).

COEPD Promotion and Tenure Committee, Committee Member (June 2013 - Present).

CITE Personnel Committee, Committee Chair (August 2006 - August 2014).

CITE Curriculum Committee, Committee Member (August 2007 - August 2013).

GSEPD Promotion and Tenure Committee, Committee Member (June 2010 - June 2013).
University

Academic Planning, Policies, and Standards Committee of the Graduate Council, Committee Chair (August 2014 - Present).

Graduate Planning Committee for Engineering, Chairperson (January 2014 - Present).

COEPD Promotion and Tenure Committee, Committee Member (June 2013 - Present).

Faculty Salary Adjustment Team, Chairperson (October 2012 - Present).

Marshall University Budget Work Group, Committee Member (August 2012 - Present).

Marshall University Graduate Council, Committee Member (August 2012 - Present).

Academic Planning, Policies, and Standards Committee of the Graduate Council, Committee Member (August 2013 - August 2014).

Faculty Senate Executive Committee, Chairperson (August 2012 - August 2014).

Marshall University Faculty Senate, Chairperson (August 2012 - August 2014).

Strategic Enrollment Planning Committee, Committee Member (August 2012 - August 2014).

Program Review and Assessment Committee of the Graduate Council, Committee Member (August 2012 - August 2013).

GSEPD Promotion and Tenure Committee, Committee Member (October 2010 - June 2013).

Marshall University Faculty Senate, Committee Member (January 1, 2011 - December 31, 2011).

M.U. Faculty Senate Executive Committee, Committee Member (August 2001 - August 2010).

M.U. Graduate Council, Chairperson (August 2001 - August 2010).

Professional

Management Division of the American Institute of Chemical Engineers, Director, New York, New York, USA (January 2009 - February 2015).

Management Division of the American Institute of Chemical Engineers, Charleston, West Virginia, USA (January 2009 - December 2011).

Community

Charleston 1st Ward, The Church of Jesus Christ of Latter-day Saints, Bishop, South Charleston, West Virginia, USA (August 2008 - September 2014).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships
Project Management Institute, PMI, Project managers and associates worldwide. (January 2004 - Present).

West Virginia/Ohio Valley chapter of Project Management Institute, WV/OV PMI Chapter, Ex-Officio Board Member; I am a former President & CEO of the WV/OH Valley Chapter, Project managers and associates. (January 2004 - Present).

American Institute of Chemical Engineers, AIChE, Fellow; Director of the Management Division; Former Chair; Vice Chair, The Management Division is one of the major divisions of the American Institute of Chemical Engineers, and is open to members worldwide. (January 1975 - Present).

Faculty Development Activities Attended


Conference Attendance, "2013 Annual Meeting of the American Institute of Chemical Engineers", American Institute of Chemical Engineers, San Francisco, California, USA. (November 2, 2013 - November 6, 2013).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

John and Frances Rucker Outstanding Graduate Advisor Award, Marshall University Graduate College and Graduate Council, (April 29, 2014).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Greg Michaelson
Rank: Assistant Professor

Start Date at Marshall as a Faculty Member: August 17, 2014
Status: Probationary

Highest Degree Earned: Ph D Date Degree Received: 2014
Conferring Institution: West Virginia University, Morgantown, WV
Area of Degree Specialization: Civil Engineering, Structural Engineering
Professional Registration/Licensure: Engineering Intern
Field of Registration/Licensure: WV EI Certificate #9959 (No Expiration Date)
Agency: West Virginia State Board of Registration for Professional Engineers
Date Obtained, Expiration Date Obtained: October 1, 2014

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
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<th>Term/Year</th>
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<th>% Response</th>
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<td>Bridge Engineering</td>
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<td>Introduction to Geomatics</td>
<td>10</td>
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<td>CE 241</td>
<td>Introduction to Geomatics</td>
<td>18</td>
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</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.
1) Scholarship/Research

Contracts, Grants and Sponsored Research

Michaelson, G. K. (Co-Principal), Barth, K. E. (Principal), Barker, M. G. (Co-Principal), Contract, "Technical Program Management for the Short Span Steel Bridge Alliance and Development of the Bridge Technology Center at WVU", American Iron & Steel Institute, Federal, $89,819.00, Funded. (May 1, 2015 - December 31, 2015).

Michaelson, G. K. (Co-Principal), Barth, K. E. (Principal), Barker, M. G. (Co-Principal), Contract, "Testing of Shallow Steel Press-Brake Tub Girders", American Iron & Steel Institute, Federal, $73,816.00, Funded. (May 1, 2015 - December 31, 2015).

Intellectual Contributions


Barth, K. E., Michaelson, G. K., Morgan, S. A. (2011). *Serviceability Evaluation of ITD 9th Street Bridge*. Boise, ID:
Presentations

Michaelson, G. K. (Presenter & Author), Other, Infrastructure Week 2015, American Galvanizers Association, Webinar, "Innovative, Cost-Effective Options for Short Span Steel Bridge Design", Other, Non-Academic, National, peer-reviewed/refereed, Accepted. (May 12, 2015).


Barth, K. E. (Author Only), Michaelson, G. K. (Presenter & Author), Oral Presentation, WVDOT Headquarters


Barth, K. E. (Author Only), Michaelson, G. K. (Presenter & Author), Oral Presentation, Virginia DOT Headquarters Meeting, Virginia DOT, Richmond VA, "Redundancy Requirements for Steel Truss Bridges", Other, Non-Academic, State, peer-reviewed/refereed, Invited. (July 22, 2013).


Barth, K. E. (Author Only), Michaelson, G. K. (Presenter & Author), Oral Presentation, Ohio DOT Headquarters Meeting, Ohio DOT, Columbus, OH, "Redundancy Requirements for Steel Truss Bridges", Other, Non-Academic, State, peer-reviewed/refereed, Invited. (August 17, 2012).


**Directed Student Learning and Research**


Petrie, W., Research, Master's Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, "A Feasibility Study of Retro-fitting Green Roofs on an Existing Structure on Marshall University's Campus", Completed. (January 12, 2015 - May 1, 2015).

Barido, M., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours,


2) Service

Department

Marshall University Theta Tau Colony, Faculty Advisor, (January 12, 2015 - Present).

Scholarship Committee, Committee Member, (January 7, 2015 - Present).

Search Committee (Mechatronics Position), Committee Member, (November 14, 2014 - Present).


College


University

"Incredibles" Committee, Committee Member (August 29, 2014 - Present).

Community


Cheat Lake Elementary School, Annual Science Fair Judge, Morgantown, WV, USA (October 2011 - October 2013).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

Engineers Club of Huntington, ECH, Member, Since 1937, ECH has existed as an independent organization in the Huntington, WV area serving professional engineers and scientists in industry, government, education, and private practice. (October 2014 - Present).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

Graduate Research Fellowship, National Science Foundation, (April 2011).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Andrew P Nichols
Rank: Associate Professor

Start Date at Marshall as a Faculty Member: August 17, 2007

Status: Tenured

Highest Degree Earned: Ph D Date Degree Received: 2004

Conferring Institution: Purdue University, Lafayette, IN

Area of Degree Specialization: Civil Engineering, Transportation Engineering

Professional Registration/Licensure: Professional Traffic Operations Engineering (PTOE), Professional Engineer (PE)

Field of Registration/Licensure: Completed a six hour exam for individuals with a PE and experience in traffic operations., Licensed Professional Engineer in WV, MD, and SC

Agency: Institute of Transportation Engineers, WV PE Board

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<th>Title</th>
<th>Enrolled</th>
<th>% Respon</th>
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| Spring 2015 | TE 699 | Comprehensive Project          | 1        | 100%
| Spring 2015 | CE 637 | Highway Safety Engineering     | 8        | 100%
| Spring 2015 | ENGR 102 | Introduction to CAD    | 22       | 100%
| Spring 2015 | CE 342 | Transportation Engineering     | 32       | 100%
| Fall 2014   | TE 699 | Comprehensive Project          | 1        | 100%
| Fall 2014   | CE 443 | Highway Design                 | 5        | 100%
| Fall 2014   | CE 443 | Highway Design                 | 5        | 100%
| Fall 2014   | CE 651 | SpTp: Highway Engineering      | 1        | 100%
| Fall 2014   | CE 651 | SpTp: Highway Engineering      | 1        | 100%
| Summer 2014 | CE 650 | SpTp: Roadway Safety Auditing  | 1        | 100%
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

**Contracts, Grants and Sponsored Research**

Nichols, A. P., Contract, "Intelligent Transportation Systems Management", WVDOT, State, $499,000.00, Funded. (February 1, 2014 - Present).

Nichols, A. P. (Principal), Sponsored Research, "Web-Accessible Crash Database Development", West Virginia
Department of Transportation, State, $328,848.00, Funded. (November 1, 2011 - Present).

Nichols, A. P. (Principal), Sponsored Research, "Morgantown Traffic System Improvement Project", West Virginia Department of Transportation, State, $1,882,096.00, Funded. (November 1, 2010 - Present).

Nichols, A. P. (Principal), Sponsored Research, "Intelligent Transportation Systems in WV", West Virginia Department of Transportation, State, $1,250,000.00, Funded. (November 2007 - Present).


Nichols, A. P. (Principal), Sponsored Research, "Evaluation of the Percent of Overloaded Vehicles Receiving Proper Permits", West Virginia Department of Transportation, State, $160,000.00, Funded. (December 1, 2012 - February 28, 2015).

Nichols, A. P. (Principal), Sponsored Research, "Evaluation of Deer-Vehicle Collision Rates in WV", West Virginia Department of Transportation, State, $125,000.00, Funded. (December 31, 2012 - October 31, 2014).

Nichols, A. P. (Co-Principal), Sponsored Research, "Evaluation of Roundabouts Constructed as Part of the Gateway Connector in Fairmont, WV", West Virginia Department of Transportation, State, $174,955.00, Funded. (December 1, 2010 - August 1, 2013).

Nichols, A. P. (Principal), Sponsored Research, "Signing for Preventing End of Queue Accidents", West Virginia Department of Transportation, State, $180,000.00, Funded. (May 1, 2010 - November 30, 2011).

Nichols, A. P. (Principal), Sponsored Research, "WV 511 Feasibility Study", West Virginia Department of Transportation, State, $224,900.00, Funded. (March 1, 2010 - March 30, 2011).

Intellectual Contributions


Nichols, A. P. (2014). *Reidentification of Trucks Based on Axle Spacing Measurements to Facilitate Analysis of Weigh-in-Motion Accuracy* 93rd Annual Meeting of the Transportation Research Board.


**Presentations**


Nichols, A. P. (Panelist), Other, GroupSync Workshop, Rhythm Engineering, Kansas City, MO, "What's next in


Directed Student Learning and Research


Rowe, G., Research, MSE Comprehensive Project Chair, Engineering Department, TE, 699, 3 credit hours, "Overhead Sign Lighting", In-Process. (August 2014 - Present).

Whitt, A., McQuerry, J., Research, Supervised Research, Computer Science Department, "Developing a System to Evaluate Alternative Traffic Detection Technologies", In-Process. (December 1, 2013 - Present).

Yanev, A., Research, Supervised Research, Computer Science Department, "Implementing a Sliding Window Method to Identify Crash Hot Spots", In-Process. (December 1, 2013 - Present).


Barido, M., Research, MSE Comprehensive Project Committee, Engineering Department, TE, 699, 3 credit hours, "Bridge Abutment Investigation", Completed. (August 2014 - December 2014).


2) Service

**Department**

West Point Bridge Design Competition, Committee Member, (October 1, 2013 - May 17, 2014).

Structures Faculty Search Committee, Committee Chair, (December 1, 2013 - May 1, 2014).

ASCE Student Chapter Virginia’s Conference, Faculty Advisor, (April 4, 2014 - April 6, 2014).

Faculty Travel Policy, Committee Chair, (September 1, 2013 - November 30, 2013).

Structures Faculty Search Committee, Committee Member, (October 1, 2012 - May 15, 2013).

West Point Bridge Design Competition, Committee Member, (October 1, 2012 - May 15, 2013).

Engineering Chair Search Committee, Committee Member, (December 1, 2012 - May 1, 2013).

ASCE Student Chapter Virginia’s Conference, Faculty Advisor, (April 4, 2013 - April 6, 2013).

Clay Center Engineering Day, Faculty Advisor, (February 1, 2013 - February 25, 2013).

West Point Bridge Design Competition, Committee Member, (October 1, 2011 - May 15, 2012).

Mechanical Engineering Faculty Search, Committee Member, (September 1, 2011 - April 30, 2012).

ASCE Student Chapter Virginia’s Conference, Faculty Advisor, (March 29, 2012 - March 31, 2012).

Pi Day Student Chapter Fundraiser, Target, (March 14, 2012).


West Point Bridge Design Competition, Committee Member, (January 1, 2011 - May 15, 2011).


**College**

Personnel Committee, Committee Member (August 2014 - Present).

CITE Website Committee, Committee Member (February 1, 2013 - Present).

CITE Curriculum Committee, Committee Chair (January 1, 2011 - Present).

AEC Building Space Committee, Committee Member (December 2014 - May 2015).

Dean Search Committee, Committee Member (September 2, 2012 - April 30, 2013).

Lab Technician Search Committee, Committee Member (April 1, 2012 - June 30, 2012).

University

Faculty Senate, Committee Member (August 2014 - Present).

Honors College Curriculum and Policies Committee, Committee Member (August 2014 - Present).

Reynolds Outstanding Teaching Award, Committee Member (August 2014 - Present).

University Curriculum Committee, Committee Member (January 1, 2011 - Present).

December Commencement, CITE Marshall (December 14, 2014).

Distinguished Artists and Scientists Award (DASA), Committee Member (January 2014 - April 2014).

Marshall University Campus Master Plan, Attendee, Meeting (December 1, 2012 - March 30, 2013).

Professional

WV Autonomous Vehicle Task Group, Committee Member, Charleston, WV, USA (October 2014 - Present).

Governor's Blue Ribbon Commission on Highways, Member, Charleston, WV, USA (September 1, 2012 - Present).

Transportation Research Board Conference and Journal, Reviewer, Conference Paper (August 1, 2012 - Present).


North American Travel Monitoring Exhibition and Conference Organizing Committee, Committee Member, Miami, FL, USA (November 2014 - May 2016).

Council of University Transportation Centers Student Award Reviewer, Reviewer, Ad Hoc Reviewer, Washington, DC, USA (November 1, 2013 - November 30, 2013).

Expert Task Group on LTPP Traffic Data, Member, Washington, DC, USA (March 2010 - April 2013).

Council of University Transportation Centers Student Award Reviewer, Reviewer, Ad Hoc Reviewer, Washington, DC, USA (November 1, 2012 - November 30, 2012).

Community

KYOVA Technical Advisory Committee, Member, Huntington, WV, USA (January 1, 2012 - Present).

WV First Lego League, Coach, Huntington, WV, USA (September 1, 2014 - November 13, 2014).

Ohio River Sweep, Attendee, Meeting, Huntington, WV, USA (June 21, 2014).

Hal Greer Boulevard Road Safety Audit, Attendee, Meeting, Huntington, WV, USA (June 10, 2014 - June 11, 2014).

Ohio River Sweep, Attendee, Meeting, Huntington, WV, USA (June 14, 2013).


10th Street Viaduct Cleaning Crew, Volunteer, Huntington, WV, USA (May 18, 2012).

Boy Scouts of America, Pack 14 Cubmaster, Huntington, WV, USA (January 1, 2011 - December 31, 2011).

YMCA Soccer League, Assistant Coach, Huntington, WV, USA (January 1, 2011 - December 31, 2011).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

**Professional Memberships**

Intelligent Transportation Systems America, ITSA. (January 2008 - Present).

Transportation Research Board, TRB, Committee Member, Appointed member of Highway Traffic Monitoring committee (ABJ35), which focuses on research issues related to transportation data collection. (August 2007 - Present).


Institute of Transportation Engineers, ITE. (August 2000 - Present).

American Society of Civil Engineers, ASCE. (August 1999 - Present).

American Society for Testing and Materials, ASTM, Committee Member, Develops standards and specifications for national use. (August 1998 - Present).

**Faculty Development Activities Attended**

Conference Attendance, "WV American Society of Civil Engineers Annual Meeting", ASCE, Wheeling, WV, USA, 6 credit hours. (September 26, 2014 - September 28, 2014).

Workshop, "Ohio Department of Transportation Research Summit", ODOT, Columbus, OH, USA, 6 credit hours. (September 19, 2014).


Workshop, "Transit Crash Investigation 2", FHWA, Tampa, FL, USA, 30 credit hours. (June 23, 2014 - June 27, 2014).

Workshop, "Transit Crash Investigation 1", FHWA, Baltimore, MD, USA, 30 credit hours. (May 19, 2014 - May 23, 2014).

Workshop, "ABET Assessment Workshop", CITE, Huntington, WV, USA, 6 credit hours. (February 8, 2014).


Conference Attendance, "WV American Society of Civil Engineers Annual Meeting", ASCE, Beckley, WV, USA, 6 credit hours. (September 27, 2013 - September 28, 2013).

Conference Attendance, "iPED Teaching Conference", Marshall University, Huntington, WV, USA, 4 credit hours. (August 20, 2013).

Continuing Education Program, "MU Winter Technical Conference", Marshall University ASCE-SAME Student Chapter, Huntington, WV, USA, 6 credit hours. (January 24, 2013).


Conference Attendance, "FHWA Everyday Counts Summit", Federal Highway Administration, Baltimore, MD, USA, 8 credit hours. (October 16, 2012 - October 17, 2012).

Conference Attendance, "West Virginia DOT Transportation Planning Conference", West Virginia Department of Transportation, Shepherdstown, WV, USA, 4 credit hours. (October 2, 2012 - October 3, 2012).

Seminar, "Academic Affairs Summer Retreat", Marshall University, Huntington, WV, USA, 3 credit hours. (August 17, 2012).


Workshop, "GroupSync", Rhythm Engineering, Kansas City, MO, USA, 8 credit hours. (June 13, 2012 - June 15, 2012).

Conference Attendance, "North American Travel Monitoring Exposition and Conference", Transportation Research Board, Dallas, TX, USA, 16 credit hours. (June 4, 2012 - June 6, 2012).

Workshop, "WV Freight Forum", Federal Highway Administration, Morgantown, WV, USA, 4 credit hours. (May 31, 2012).


Workshop, "Roundabout Design", West Virginia Department of Transportation, Charleston, WV, USA, 8 credit hours. (June 15, 2011 - June 16, 2011).


Conference Attendance, "SAME Technical Conference", SAME Student Chapter at Marshall University, Huntington, WV, USA, 8 credit hours. (January 22, 2011).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

Hedrick Outstanding Faculty Award, Marshall University, (December 2014).

Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. William Pierson  
Rank: Professor  

Start Date at Marshall as a Faculty Member: January 1, 2000  
Status: Tenured  

Highest Degree Earned: Ph D  
Date Degree Received: 1976  
Conferring Institution: University of Missouri - Rolla, Rolla, Missouri  
Area of Degree Specialization: Electrical Engineering  
Professional Registration/Licensure: Professional Engineer, WV  
Field of Registration/Licensure: Registered Professional Engineer, #6740  
Agency: WV Board of Registration for Professional Engineers  

Date Obtained, Expiration Date  

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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<th>Title</th>
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1) Scholarship/Research

Contracts, Grants and Sponsored Research


Pierson, W. (Co-Principal), Grant, "2010 Exploring Engineering: Academy of Excellence", Chesapeake Energy & Rahall Transportation Institute, State, $50,000.00, Funded. (June 20, 2010 - June 26, 2010).

Presentations


2) Service

College

University Assessment Committee, Attendee, Meeting.

University

BSE Search Committees, Committee Member (January 2013 - Present).

Professional

ABET, Alternate to B.O.D. for NCEES (January 2012 - Present).

WV Board of Registration for Prof. Engineers, Officer, Vice President, Charleston, WV (2008 - Present).

NCEES, Member of FE Exam Committee, Clemson, SC (1990 - Present).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

WV Board of Registration for Professional Engineers, WV PE Board, Vice-Chair, Appointed by Governor Manchin in 2006. The purpose of the Board is to regulate professional engineering licensure and practice in order to protect the health, welfare, and safety of the public. (October 20, 2005 - Present).

National Council of Examiners of Engineering and Surveying, NCEES, Representative to ABET BOD; Chair of FE Exam Committee and EE Subcommittee, NCEES is the publisher of national exams required for licensure as a
professional engineer and surveyor. (February 1990 - Present).

National Council of Examiners of Engineering and Surveying, NCEES, Chair of FE Exam Committee and EE Subcommittee, NCEES is the publisher of national exams required for licensure as a professional engineer and surveyor. (February 1990 - Present).

American Society of Engineering Education, ASEE, Professional organizations for engineering education. (March 1, 1984 - Present).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Sarder Sadique  Rank: Assistant Professor

Start Date at Marshall as a Faculty Member: August 17, 2014

Status: Probationary

Highest Degree Earned: Ph D  Date Degree Received: 2006

Conferring Institution: National University of Singapore, Singapore

Area of Degree Specialization: Mechanical Engineering, Biomechanics, Tribology

Professional Registration/Licensure:

Field of Registration/Licensure: 

Agency:

Date Obtained, Expiration Date:

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research
Research Currently in Progress

Sadique, Sarder E, “Influence of rough surfaces on static frictional characteristics and sliding mechanics”, Writing Results, Scholarly.


2) Service

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships


Awards and Honors

Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Asad A Salem
Rank: Professor

Start Date at Marshall as a Faculty Member: August 17, 2013
Status: Probationary

Highest Degree Earned: Date Degree Received:
Conferring Institution:
Area of Degree Specialization:
Professional Registration/Licensure:
Field of Registration /Licensure:
Agency:
Date Obtained, Expiration Date

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

Contracts, Grants and Sponsored Research
Salem, A. (Co-Principal), Sponsored Research, "A NEW HEATING AND COOLING COGENERATION SYSTEM: INTEGRATION OF FUEL CELLS AND HEAT PUMPS", DOE, Federal, $200,000.00, Currently Under Review. (December 17, 2014 - Present).

Salem, A. (Principal), Grant, "Siemens PLM/ CA Sostware for ACademia USE", Siemens, Private, $134,000,000.00, Funded. (September 15, 2014 - Present).


Salem, A. A. (Principal), Contract, "LNG Cooling Systems", Qatar Gas, Private, $97,000.00, Not Funded. (December 1, 2012 - May 1, 2014).

Research Currently in Progress

Salem, Asad A, "A DESIGN AND PARAMETRIC STUDY OF CANOPY AIR CURTAIN (CAC)", On-Going, Scholarly.


Directed Student Learning and Research

Research, Master's Thesis Committee Chair.

Foudh, K., Research, Master's Thesis Committee Chair. (February 2013 - May 2014).

2) Service

Department

Chair of the Applied Science Search Committee, Committee Chair, (January 1, 2014 - August 15, 2014).

ME Search Committee, Committee Chair, (January 1, 2014 - August 15, 2014).

ME Search Committee, Committee Chair, (November 20, 2013 - December 31, 2013).


College

Assessment Committee, Committee Chair (January 1, 2014 - December 31, 2014).

Assessment Committee, Committee Chair (August 17, 2013 - December 31, 2013).

University

CLA- University Assessment Committee, Faculty Mentor (January 1, 2014 - December 31, 2014).

CLA- University Assessment Committee, Faculty Mentor (September 1, 2013 - December 31, 2013).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.
**Professional Memberships**


**Faculty Development Activities Attended**


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II  
Faculty Data Sheet  
May 15, 2010 - May 15, 2015

Name: Dr. David Scott Simonton  
Rank: Professor

Start Date at Marshall as a Faculty Member: November 1, 2001

Status: Tenured

Highest Degree Earned: Ph D  
Date Degree Received: 2002

Conferring Institution: University of New Mexico, Albuquerque, NM

Area of Degree Specialization: Engineering, Environmental Engineering

Professional Registration/Licensure: Licensed Remediation Specialist, Professional Engineer

Field of Registration /Licensure: WV - active. Inactive registration in TN, NM

Agency: WVDEP, WV Board of Professional Engineers

Date Obtained, Expiration Date Obtained: January 1, 1998

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. *(Expand the table as necessary)*

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</table>
1) Scholarship/Research

**Intellectual Contributions**

Sears, E., Simonton, D. S. USING ESTIMATION OF AVERAGE DAILY PER CAPITA METHAMPHETAMINE CONSUMPTION VIA ANALYSIS OF UNTREATED WASTEWATER TO DETERMINE THE EFFICACY OF METHAMPHETAMINE CONTROL LAWS AND REGULATIONS IN WEST VIRGINIA. *International Journal of Drug Policy (tentative).*


Surber, S., Simonton, D. S. Water Pollution from Coal Mining and the Imminent and Inevitable. *Local Environment (tentative).*


**Presentations**


2) Service

Department
Chair search committee, Committee Member, (May 2014 - Present).

College
CITE Curriculum, Committee Member (August 1, 2012 - Present).

University
Student Conduct and Welfare, Committee Member.
Gen Ed Council, Committee Member (August 1, 2012 - Present).
University Functions, Committee Member (August 1, 2012 - Present).
Faculty Senate, University Senate Service (January 1, 2012 - Present).

Community
Southwings, Pilot, South Charleston, WV (2007 - Present).
WVEQB, Board Member (2002 - Present).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships
American Society of Civil Engineers.
Association of Environmental and Engineering Geologists.

Faculty Development Activities Attended
Conference Attendance, "AEG Conference", Association of Environmental and Engineering Geologists, Anchorage, AK, USA. (September 2011).
Workshop, "Mining Impacts Workshop", USEPA, Others, Breaks Interstate Park, KY, USA. (April 2011).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Anthony B. Szwilski
Rank: Professor

Start Date at Marshall as a Faculty Member: August 16, 1994

Status: Tenured

Highest Degree Earned: Ph D Date Degree Received: 1975

Conferring Institution: University of Nottingham, United Kingdom

Area of Degree Specialization: Geomechanics, Rock Mechanics

Professional Registration/Licensure:
Chartered Engineer, European Engineer, Professional Engineer,
Surface Mine Manager Certificate, Underground Mine Manager Certificate

Field of Registration /Licensure:
Agency: United Kingdom, WV and KY, Alberta, Canada, Alberta, Canada

Date Obtained, Expiration Date Obtained: September 1, 1982
Obtained: January 1, 1979
Obtained: January 1, 1979

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
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<th>% Respon</th>
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<td>Intro to Safety (CT)</td>
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</table>
1) Scholarship/Research

Contracts, Grants and Sponsored Research

Szwilski, A. B. (Principal), Sponsored Research, "Proposal", Alpha Foundation, Private, $150,000.00, Currently Under Review.

Gudivada, V. (Co-Principal), Szwilski, A. B. (Co-Principal), Sponsored Research, "CI-P: An infrastructure for software defined information networking and flexible spectrum access in sparsely connected communities", National Science Foundation, Federal, $71,376.00, Currently Under Review. (March 1, 2015 - December 31, 2015).

Linz, M. F. (Co-Principal), Szwilski, A. B. (Principal), LeGrow, C. W. (Supporting), Linz, T. D. (Supporting), Grant, "Psychology of Mining Safety Behavior", Alpha Foundation, Private, $700,000.00, Not Funded. (September 1, 2014 - December 2014).


Szwilski, A. B. (Principal), Sponsored Research, "Developing Virtual Mine Safety Training Campus", Mine Safety & Health Administration, Federal, $117,000.00, Funded. (September 30, 2011 - March 31, 2013).


Szwilski, A. B. (Co-Principal), Sponsored Research, "Cyberinfrastructure for Transformational Scientific Discovery", WV EPSCoRE NSF, Federal, $1,100,000.00, Funded. (September 30, 2009 - October 1, 2012).

Gudivada, V. (Other), Szwilski, A. B. (Co-Principal), Grant, "Cyberinfrastructure for Transformational Scientific Discovery in Arkansas and West Virginia (CI-TRAIN)", NSF, Federal, $1,350,000.00. (September 1, 2009 - August 30, 2012).

Szwilski, A. B. (Principal), Contract, "Develop Voluntary Land Stewardship Program", WV Department of
Environmental Protection, State, $320,000.00, Funded. (July 2010 - February 2012).


Szwilski, A. B. (Principal), Sponsored Research, "Developing a Visualization Resource Center at MU", Department of Education, Federal, $257,000.00, Funded. (August 30, 2009 - September 1, 2011).

**Intellectual Property**

Szwilski, A. B., Begley, R. D., Patent, "Motion Induced Generator", # 7629700, Regular, United States.


**Presentations**


**Research Currently in Progress**


Liu, Jian, Szwilski, Anthony B, Dr. Felix Cheung, "Gait analysis using markerless motion capture system", On-Going, Scholarly.

Szwilski, Anthony B, Chueng, Konz, Suzanne M, "Validation of a Markerless Motion Analysis System", On-Going, Scholarly.

Comeau, Matthew J, Konz, Suzanne M, Szwilski, Anthony B, "Validation of a Markerless Motion Analysis System", On-Going, Scholarly.

**Directed Student Learning and Research**

Davis, d., Research, Supervised Research, Computer Science Department. (July 2013 - Present).

Research, Supervised Research, Computer Science Department, "Virtual Environment Mining Applications". (January 2012 - December 2012).

2) Service

**Department**

Search Committee, Committee Chair, (December 2014 - Present).

Personal Committee, (June 2014 - October 2014).

Search Committee: Safety & Engineering Chair, Committee Member, (2013).

Search Committee, Committee Member, (April 2012 - December 2012).

**College**

Space Committee, Committee Chair (November 2014 - Present).

ABET Committee (October 2014 - Present).

Bioinformatics Work Group, Facilitator (April 2010 - 2013).

Engineering Technician Search, Committee Member (March 2012 - September 2012).

**University**

SBAC, Inc, Director (July 2006 - Present).

Brownfields Assistance Center (BAC), Director (July 2005 - Present).

Legislative Committee, Committee Member (July 2012 - July 2015).

CI-TRAIN, Chairperson (October 2009 - October 2012).

Sequencing & Bioinformatics Forum, Chairperson (August 2010).

**Professional**

Appalachian Coalition for Geohazards in Transportation, Chairperson (July 1999 - Present).

**Community**

Heritage Farm Community Leaders Group, Program Organizer (July 2006 - Present).

Miners Celebration Conference, Chairperson, Beckley, WV (October 4, 2012 - October 4, 2014).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

**Professional Memberships**

Society for Mining, Metallurgy and Exploration., SME, Member. (July 1, 1980 - Present).
Faculty Development Activities Attended


Conference Attendance, "WV Brownfields Conference", Marshall University and WVU, Morgantown, WV. (September 2011).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

Distinguished Artists and Scholars Award, Marshall University, (April 2013).

Distinguished Artists and Scholars Award, Marshall University, (April 2013).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Dr. Isaac William Wait

Rank: Associate Professor

Start Date at Marshall as a Faculty Member: January 2, 2009

Status: Tenured

Highest Degree Earned: Ph D Date Degree Received: 2005

Conferring Institution: Purdue University, West Lafayette, IN

Area of Degree Specialization: Civil Engineering, Environmental Engineering

Professional Registration/Licensure: West Virginia License #18909, Professional Engineer, Ohio License #69553, Professional Engineer

Field of Registration /Licensure: State of West Virginia, State of Ohio

Date Obtained, Expiration Date

Obtained: January 1, 2009 Obtained: January 1, 2005

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.
1) Scholarship/Research

Contracts, Grants and Sponsored Research


Wait, I. W. (Co-Principal), Huffman, J. T. (Co-Principal), Wahjudi, P. (Co-Principal), Wait, I. W. (Principal), Sponsored Research, "Decision support model using remotely sensed data for enhancing green highway infrastructure and stormwater management", Mid-Atlantic Transportation Sustainability Center, Other, $134,960.00, Not Funded. (October 15, 2014).

Wait, I. W., Sponsor, "WVDEP & CEGAS West Virginia Water Resources Project", West Virginia Department of Environmental Protection, State, $120,000.00, Funded. (July 1, 2012 - June 30, 2014).


Wait, I. W., Grant, "EPSCoR Mini-Grant Program: Gridded hydrologic analysis of active and reclaimed mining sites for runoff flow and water quality prediction [Not Funded]", West Virginia Higher Education Policy Commission Division of Science & Research, State, $5,000.00, Not Funded. (2013).

Wait, I. W., Grant, "Criteria for Predicting Scour of Erodible Rock in West Virginia", West Virginia Department of Transportation, State, $281,944.00, Funded. (March 31, 2011 - September 30, 2013).

Wait, I. W. (Co-Principal), Huffman, J. T. (Co-Principal), Sponsored Research, "Academic Integrity and Student Perception of Faculty Attitudes", Marshall University Faculty Senate, Marshall University, $2,000.00, Funded. (July 1, 2012 - July 30, 2012).
Wait, I. W. (Co-Principal), Sponsored Research, "Analysis of West Virginia Marcellus Shale Water use and Large Quantity Water Users", West Virginia Water Research Institute, State, $87,518.00, Not Funded. (2011).

Wahjudi, P. (Principal), Aluthge, A. (Co-Principal), Wait, I. W. (Co-Principal), Conlon, J. P. (Co-Principal), Gudivada, V. (Co-Principal), Grant, "STEP Type 1A: Advancing STEM Success, Retention and Recruitment in the Tri-state (ASSeRRT)", National Science Foundation, Federal, $1,000,000.00, Not Funded. (August 1, 2011 - December 30, 2011).

**Intellectual Contributions**

Wait, I. W. *Concept inventory for engineering hydrology - development and implementation* Annual Conference & Exposition, American Society of Engineering Education, Seattle, WA.


**Presentations**


**Research Currently in Progress**

Wait, Isaac W, Armin Eberlein, "Academic Integrity Among Undergraduate Engineering Students - Comparison of International and Domestic Students", Writing Results, Scholarly.


Wait, Isaac W, "Drinking water price, operational costs, and relationship to utility ownership structure.", On-Going, Scholarly.


Wait, Isaac W, Mike, Bradley, "Virtualization of Software and Laboratory Instruction", On-Going, Scholarly.

2) Service

**Department**

Environmental Search Committee, Committee Chair, (November 2014 - Present).

BSE Scholarship Committee, Committee Member, (August 2013 - Present).

MS Examination Committee - Adam Petrie, Committee Member, (December 9, 2014).

Engineering & Technology Expo, Committee Member, (November 16, 2013).

Mechanical Search Committee, Committee Member, (January 3, 2013 - October 23, 2013).

MS Examination Committee - Darwan Pursoo, Committee Member, (October 16, 2013).

MS Examination Committee - Alexander Neal, Committee Member, (April 26, 2012).

Temporary Faculty Member Search Committee, Committee Member, (October 2011 - December 2011).
Engineers Without Borders, Faculty Advisor, (January 2011 - December 2011).

MS Examination Committee - Dana Moses, Committee Member, (December 14, 2011).

MS Examination Committee - Larry Riggleman, Committee Member, (November 5, 2011 - December 5, 2011).

MS Examination Committee - Jacob Fishel, Committee Member, (April 7, 2011).

College

Personnel Committee (Tenure & Promotion), Committee Member (March 2014 - Present).

Week of Welcome - Freshman Presentation, BSE program representative (August 24, 2012).

Computer Science Camp, Presentation (June 27, 2012).

EFFECTs training workshop, Lead Coordinator (March 2012 - May 2012).

Dean Search Committee, Committee Member (October 2011 - April 2012).

Green and White Day, Showcase Presenter (November 11, 2011).

Presentation to UNI 102, Presenter (October 11, 2011).

Summer Orientation 2011, Faculty Advisor (June 2011 - August 2011).

High School Open House, Speaker (April 2, 2011).

University

Hedrick Outstanding Faculty Member Award Committee, Committee Member (November 2014 - Present).

Multidisciplinary and Interdisciplinary Degree Program Development Committee, Committee Member (March 2014 - Present).

General Education Committee, Committee Member (January 2009 - Present).

General Education Committee, Committee Chair (August 2012 - April 2014).

Peer Orientation and Development (POD), Faculty Mentor (August 2012 - May 2013).

Academic Affairs Leadership Academy, Attendee, Meeting (January 2012 - November 2012).

Pickens-Queen Teaching Award Committee, Committee Chair (August 2011 - August 2012).

Pickens-Queen Teaching Award Committee, Committee Member (October 2010 - August 2012).

FYS Instructor Focus Group, Guest Speaker (April 20, 2012).

iPED Fall Conference, Session Chair (August 16, 2011).

FYS Summer Work Group, Guest Speaker (June 2011).

FYS Instructor Focus Group, Guest Speaker (February 22, 2011).
Professional


Desalination and Water Treatment, Reviewer, Journal Article, Hopkinton, MA, USA (August 2011 - Present).

National Council of Examiners for Engineering and Surveying - FE Exam Development Committee, Committee Member, Clemson, South Carolina (November 2010 - Present).

Water Environment Research, Reviewer, Journal Article (September 2010 - Present).

National Science Foundation, Graduate Research Fellowship Committee, Committee Member (November 2013 - January 2014).

NCEES Standard Setting Study, Member, Atlanta, GA, USA (September 14, 2012 - September 16, 2012).


Environmental Engineering Division, ASEE, Reviewer, Conference Paper (January 2012 - February 2012).


American Society of Civil Engineers - Tractive Force Committee, Officer, Secretary, Washington, District of Columbia (August 2008 - July 2011).


Community

Stormwater Runoff Reduction - Lattas, Committee Member, Huntington, WV (August 2014 - Present).

Huntington High School - Engineering Academy Advisory Board, Board Member, Huntington, West Virginia (January 2011 - Present).


Huntington Sanitary Board, Facilitated Student Research Project, Huntington, WV, USA (August 2012 - December 2012).

Huntington High School - Engineering Academy Activity, Developed and Administered Learning Activity, Huntington, West Virginia (March 5, 2012 - March 16, 2012).

WV Department of Environmental Protection, Stormwater Workgroup, Committee Member, Charleston, WV, USA (January 2011 - December 2011).
Huntington Sanitary Board, Facilitated Student Research Project, Huntington, WV, USA (August 1, 2011 - December 5, 2011).

Discover the Real WV Foundation, Guest Speaker, Huntington, WV, USA (June 1, 2011 - June 2, 2011).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

American Society for Engineering Education, ASEE.


Faculty Development Activities Attended


NCEES Fundamentals of Engineering Examination Committee Meeting, NCEES, Clemson, SC. (October 31, 2014 - November 1, 2014).


Awards and Honors

Environmental Engineering Division Early Career Grant, American Society for Engineering Education, (June 2011).
Appendix II
Faculty Data Sheet
May 15, 2010 - May 15, 2015

Name: Mr. Wael Abd Elhalim M Zatar
Rank: Professor

Start Date at Marshall as a Faculty Member:
August 17, 2006

Status: Tenured

Highest Degree Earned: Date Degree Received:

Conferring Institution:

Area of Degree Specialization:

Professional Registration/Licensure:

Field of Registration/Licensure:

Agency:

Date Obtained, Expiration Date

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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<thead>
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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.
Contracts, Grants and Sponsored Research

Huffman, J. T. (Co-Principal), Zatar, W. A. E. M. (Co-Principal), Sponsored Research, “Deployment of High-Performance Concrete Bridge Overlays in West Virginia”, West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31, 2011).

Huffman, J. T. (Co-Principal), Zatar, W. A. E. M. (Co-Principal), Sponsored Research, “Development of Material Specification for Implementation of High-Performance Concrete for Bridge Decks”, West Virginia Department of Transportation Research and Special Studies, State, $250,000.00, Not Funded. (December 23, 2011 - December 31, 2011).

Intellectual Contributions


Presentations


Research Currently in Progress


Service

Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix III
Entrance Abilities of Past Five Years of Graduates: Engineering (MSE)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean Undergraduate GPA</th>
<th>Mean GRE Verbal</th>
<th>Mean GRE Quantitative</th>
<th>Mean GRE Analytical Writing</th>
<th>Miller Analogies Mean</th>
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<td>701.3 (n = 8)</td>
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Appendix IV
Exit Abilities of Past Five Years of Graduates: Engineering (MSE)

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## Appendix V: Assessment Summary

### Assessment Summary

**Component Area/Program/Discipline: Engineering (MSE)**

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<tr>
<th>Program’s Student Learning Outcomes</th>
<th>Assessment Measures (Tools)</th>
<th>Standards/Benchmark</th>
<th>Results/Analysis</th>
<th>Action Taken to improve the program</th>
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<tr>
<td>Students will plan technical projects through application of project management principles and tools.</td>
<td><strong>Assessment Point 1:</strong> EM 660 (Final Team Project)</td>
<td>Capstone</td>
<td>88% at Advanced; 12% at Capstone</td>
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<td></td>
<td><strong>Assessment Point 2:</strong> TE 669 (Comprehensive project report and defense)</td>
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<td>100% at Advanced</td>
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<td>Students will demonstrate through written exercises and through team projects a clear understanding of the fundamental principles of the importance of people and teamwork in technical projects and effectively working with people in engineering situations.</td>
<td><strong>Assessment Point 1:</strong> EM 660 (Written essays dealing with interactions with people while working on projects)</td>
<td>Capstone</td>
<td>100% at Advanced</td>
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<td></td>
<td><strong>Assessment Point 2:</strong> EM 660 (Team member evaluations of each other on the final team project)</td>
<td>Advanced</td>
<td>100 % at Advanced</td>
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<td>Students will apply the basic tools and concepts related to operations management.</td>
<td><strong>Assessment Point 1:</strong> EM 668 (Application-oriented homework assignments)</td>
<td>Capstone</td>
<td>Under revision. No data.</td>
<td>This is to be revised due to the development of new majors.</td>
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<td></td>
<td><strong>Assessment Point 2:</strong> EM 668 (Application-oriented exams)</td>
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<td>Under revision. No data.</td>
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</table>
| Students will evaluate a company’s financial status. | **Assessment Point 1:**  
TM 612/EM 675 (Homework and Exam 1) | Capstone | Under revision. No data. | This is to be revised due to the development of new majors. |
|-----------------------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------------|
| **Assessment Point 2:**  
TM 612/EM 675 (Final class project) | Advanced | Under revision. No data. |
| Students will communicate effectively, through written assignments and through public speaking presentations. | **Assessment Point 1:**  
EM 620 (Written essay assignments) | Capstone | 100% at Advanced |
| **Assessment Point 2:**  
TE 699 (Comprehensive Project report and oral defense) | Advanced | 100% at Advanced |
| Students will demonstrate awareness and understanding of professional, ethical, and legal responsibilities. | **Assessment Point 1:**  
EM 620 (Written application-oriented essay assignments.) | Capstone | Under revision. No data. | This is to be revised due to the development of new majors. |
| **Assessment Point 2:**  
EM 694 (Written exams) | Advanced | Under revision. No data. |
| Students will apply the basic tools and concepts related to environmental chemistry. | **Assessment Point 1:**  
ENVE 615 (Homework and laboratory assignments) | Capstone | Under revision. No data. | This is to be revised due to the development of new majors. |
| **Assessment Point 2:**  
ENVE 615 (Exams) | Advanced | Under revision. No data. |
| Students will apply the basic tools and concepts related to risk assessment. | **Assessment Point 1:**  
ESS 614 (Homework assignments and quizzes) | Capstone | Under revision. No data. | This is to be revised due to the development of new majors. |
| **Assessment Point 2:**  
ESS 614 (Exams) | Advanced | Under revision. No data. |
**Program Learning Outcome 1:** Students will plan technical projects through application of project management principles and tools.

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Program Learning Outcome 2: Students will demonstrate through written exercises and through team projects a clear understanding of the fundamental principles of the importance of people and teamwork in technical projects and effectively working with people in engineering situations.

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<td>In team situations and in individually challenging situations, the student correctly applies important principles of teamwork.</td>
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# Appendix VI

## Program Course Enrollment: Engineering (MSE)

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</tr>
<tr>
<td>TE</td>
<td>Comprehensive Project</td>
<td>S.Charleston</td>
<td>None</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>
## Appendix VII
### Program Enrollment: Engineering (MSE)

<table>
<thead>
<tr>
<th>Students</th>
<th>Year 1 2010-2011</th>
<th>Year 2 2011-2012</th>
<th>Year 3 2012-2013</th>
<th>Year 4 2013-2014</th>
<th>Year 5 2014-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Majors Enrolled</td>
<td>15</td>
<td>19</td>
<td>20</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Area of Emphasis 1: Engineering Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Principal Majors Enrolled</td>
<td>8</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Area of Emphasis 2: Environmental Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Majors Enrolled</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Area of Emphasis 3: Transportation Engineering (Infrastructure)</td>
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</tr>
<tr>
<td>Principal Majors Enrolled</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>No Area of Emphasis</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Grand Total of Students Enrolled in the Program</strong></td>
<td><strong>26</strong></td>
<td><strong>37</strong></td>
<td><strong>36</strong></td>
<td><strong>36</strong></td>
<td><strong>32</strong></td>
</tr>
<tr>
<td><strong>Graduates of the program</strong></td>
<td><strong>12</strong></td>
<td><strong>13</strong></td>
<td><strong>5</strong></td>
<td><strong>5</strong></td>
<td><strong>18</strong></td>
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</tbody>
</table>
Figure 1. Trend Line for Total Enrollment and Program Graduates: Engineering (MSE)
### Appendix VIII

**Job and Graduate School Placement Rates: Engineering (MSE)**

<table>
<thead>
<tr>
<th>Year</th>
<th># of graduates employed in major field</th>
<th># of graduates employed in related fields</th>
<th># of graduates employed outside field</th>
<th># of graduates accepted to Further Study</th>
<th># of graduates not accounted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>10</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-2012</td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-2013</td>
<td>5</td>
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<tr>
<td>2013-2014</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2015</td>
<td>19</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five –Year Total</td>
<td>50</td>
<td>7</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix IX: Letters from the Assessment Office: Engineering (MSE)

Office of Assessment & Program Review

April 28, 2015

Dr. Eldon Larsen, Program Director
Graduate Engineering Program
College of Information Technology and Engineering

Dear Eldon:

The University Assessment Committee reviewer and I have completed our evaluations of the MSE (Engineering) program's assessment of student learning for academic year 2013 – 2014. This letter will provide general comments and suggestions for improvement. Please refer to the attached assessment rubric for additional comments from your reviewer.

Your program's learning outcomes appear to be appropriate to your discipline. However, they are not written in such a way as to convince me that most require students to engage in the high levels of learning/thinking we expect of students at the graduate level. I base this assertion on seeing a heavy emphasis on application, e.g., "demonstrate the ability to apply basic tools." Another, "demonstrate awareness and understanding" is arguably at a lower level than application. There are two outcomes, though, that ask students to plan and evaluate, both of which do suggest higher levels of learning. Also, to really assess student work so that you can meaningfully differentiate relative strengths from weaknesses, you need to describe levels other than "advanced" in your rubrics. The goal of assessment is to develop a system that is granular enough that we can see these differences in performance even when our students are doing well. There is always room for improvement.

Reports for academic year 2014 – 2015 are officially due on May 15. If you need additional time to complete data analysis, please let me know and I ask that your final report be submitted no later than September 15.

Sincerely,

Mary E. Reynolds

Mary E. Reynolds, Associate Vice President for Assessment and Quality Initiatives

C: Dr. Wael Zatar, Dean, CITE
Office of Assessment & Program Review

August 5, 2013

Dr. Eldon Larsen, Program Director
MSE (Engineering)
College of Information Technology and Engineering

Dear Eldon:

The Graduate Council reviewers and I have completed our evaluations of the MSE’s (Engineering) assessment of student learning for academic year 2012 – 2013, as submitted in the Open Pathways Project report last updated in February 2013 (We did not receive an update in May). This letter will provide general comments and suggestions for improvement. Please refer to the attached assessment rubric for additional comments from reviewers.

Your program’s learning outcomes are appropriate to your discipline and address higher levels of thinking/learning. Your assessment plan shows that you use a nice variety of assessment measures. You have made a nice start developing assessment rubrics. Is it not possible in your program to have a different performance expectation (i.e. capstone) for the first assessment point? You did a nice job reporting and analyzing results for the two outcomes you assessed. I wonder, though, about the lack of description in your rubrics for any performance level other than advanced. Also, we did not receive an updated report in May. I look forward to reading your updated report for academic year 2013 – 2014.

During the academic year 2013 – 2014, programs will continue to report assessment results and plan actions using the online reporting form used last year. These reports will be due at the end of the academic year. If you have questions or concerns, please let me know.

Sincerely,

Mary E. Reynolds

Mary E. Reynolds, Associate Vice President
Assessment and Quality Initiatives

C: Dr. Wael Zatar, Dean, CITE
Dr. Eldon Larsen, Program Director  
Master of Science in Engineering (MSE)  
College of Information Technology and Engineering

Dear Eldon:

The Graduate Council and I have completed our evaluation of the MSE's (Engineering) assessment of student learning. This letter will provide general comments and suggestions for improvement. I have included the scoring rubric we used to evaluate your assessment report in a separate document.

I believe that your program's learning outcomes emphasize higher levels of cognition, but only two out of the four your reported are actually written in that way (outcomes 1 and 3). Also, this is a small point, but I recommend some revision in the wording of your outcomes. For outcome 1, I suggest, "Students will plan technical projects through application of project management principles and tools." For outcome 2, I suggest, "Students will analyze and evaluate the fundamental principles of the importance of people and teamwork in technical projects and students will work effectively with colleagues in engineering situations (could be two outcomes)." For outcome 3, I suggest, "Students will communicate effectively through written assignments and through public speaking presentations." Finally, for outcome 4, I suggest, "Students will apply statistical analysis concepts appropriately and judge statistical results for reasonableness."

You use a variety of appropriate and complementary direct assessments of student learning. However, your benchmarks and reported results do not allow sufficient detail to show relative strengths and weaknesses. It is important that you break outcomes into critical traits and assess these using rubric performance levels. This type of evaluation will result in a more nuanced analysis of student learning. I see from the end of your report that you are already beginning to implement these suggestions!

During the coming academic year, it will be important that you follow the plan you developed as part of the first two activities of the Open Pathways Demonstration Project. The project's steering committee will provide more feedback regarding next steps in that project at summer's end. If you have questions or concerns, please let me know.

Sincerely,

Mary E. Reynolds

Mary E. Reynolds
Director of Academic Assessment

One John Marshall Drive • Huntington, West Virginia 25755-2003 • Tel 304/696-2206 • Fax 304/696-2261
A State University of West Virginia • An Affirmative Action/Equal Opportunity Employer
C: Dr. Wael Zatar, Dean, CITE