

Minutes
West Virginia University Faculty Senate
Monday, November 11, 2013

1. Lisa DiBartolomeo, Faculty Senate Chair, called the meeting to order at 3:17 p.m. in Ruby Grand Hall, Erickson Alumni Center.

Members Present:

Abate, M.	Cottrell, L.	Jaczynski, J.	Montgomery-Downs, H.	Sand-Jecklin, K.
Ameri, S.	Curtis, R.	Johnstone, R.	Munasinghe, R.	Scott, H.
Anderson, J.	Dick, G.	Kale, U.	Nutter, R.	Sperow, M.
Atkins, C.	Elmore, S.	Kershner, R.	Orlikoff, J.	Srivastava, A.
Baldwin, C.	Ferrara, L.	Kite, S.	Peace, G.	Stolzenberg, A.
Bastress, R.	Finkel, M.	Knight, J.	Perna, N.	Tveter, K.
Bilgesu, I.	Funk, A.	Kopriva, N.	Petronis, J.	Utzman, R.
Billings, H.	Gilleland, D.	Kromar, R.	Petty, T.	Valenti, M.
Bonner, D.	Graber, S.	Kuhlman, J.	Proudfoot, C.	Vester, M.
Boone, D.	Griffith, R.	Lofaso, A.	Prudhomme, J.	Walter, S.
Bowen, E.	Haines, K.	Mandich, M.	Reddy, R.	Waterson, R.
Brazaitis, M.	Harner, J.	Matak, K.	Regier, M.	Watson, J.
Britten, R.	Harris, T.	Maynor, L.	Reymond, R.	Weihman, L.
Brooks, R.	Hitt, L.	Mays, M.	Riedel, B.	Wenger, S.
Burnside, J.	Hornsby, G.	McTeer, M.	Ruscello, D.	Wilcox, G.
Campbell, L.	Hostuttler, L.	Meckstroth, R.	Ryan, K.	Woloshuk, J.
Cassels, A.	Jacknowitz, A.	Merrifield, J.	Salm, A.	Yang, H.
Connors, J.				

Members Excused:

Anderson, K.	Garrett, V.	Hileman, S.	Kleist, V.	Schreurs, B.
Barretto, G.	Graves, C.	Holmes, M.	Miltenberger, M.	Sherlock, L.
Bergner, G.	Hartley, D.	Hutson, Z.	Paternostro, M.	Vona-Davis, L.
Famouri, P.	Hartnett, H.	Insch, G.		

Members Absent:

Bryner, R.	Fisher, M.	Lastinger, V.	Mucino, V.	Tower, L.
Cohen, S.	Fuller, E.	Lively, M.	Oberhauser, A.	Watson, D.
Cronin, A.	Giacobbi, P.	Lorimer, D.	Polak, J.	Whiteman, C.
Eschen, E.	Johnston, A.	Miller, M.		

Faculty Senate Officers Present:

DiBartolomeo, L.	Lee, P.	Mays, M.	Orlikoff, J.
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2. Chair DiBartolomeo moved for approval of the minutes from the Monday, October 7, 2013 meeting. Motion carried.
3. Senior Associate Provost Russ Dean reported the following:
- He congratulated President Clements on his new position, but expressed sadness over his leaving WVU.
 - Dr. Bob Jones, Dean of the Eberly College, is leading the search for the Dean of Libraries. The committee will be conducting airport interviews with nine candidates at the end of this

week, and hopes to select approximately three candidates for on-campus interviews in early December.

- He provided background information on the institutional accreditation process. A draft of WVU's self-study report will be completed by the end of 2013 for community review and comment. The report will be submitted to the Higher Learning Commission in February, at least eight weeks prior to the April 7-9, 2014 comprehensive site visit. Faculty members may be approached by peer reviewers and asked to respond to questions during that visit. He encouraged faculty to visit the accreditation pages on the Office of the Provost web site to learn more about the process.
- He made a presentation to the BOG on Friday, November 8 concerning textbook affordability. This year, the Textbook Affordability Committee focused on the goal of reducing instances of textbook customization that do not add educational value. More information is available on the Textbook Affordability page of the Office of the Provost web site.
- The University Planning Committee, chaired by Provost Wheatly, decided to approach the reduction in state funds in two phases. The first phase was to assign each operating unit a cash give-back this year. Academic units were assigned a smaller reduction proportionately than non-academic units. The second phase was a ten percent reduction planning exercise, to consider how this year's cut and future cuts were to be handled. Guiding principles for the exercise were to make the core academic mission the priority, to continue to invest in the strategic plan, to continue to focus attention on campus infrastructure, and to strive for salary increases in fiscal year 2015.
- Faculty personnel files officially close on the last work day of the year, December 30, 2013. However, SEIs for courses taught in the fall semester may be submitted until close of business on January 3, 2014.

4. Chair DiBartolomeo reported the following:

- She acknowledged President Clements for his leadership, his commitment to shared governance, and for the transparency of his administration.
- She attended the Veterans Appreciation Breakfast. John Watson, Jr., one of the last surviving members of the Tuskegee Airmen, was a guest speaker.
- The amendment to change the faculty constitution's calendar for the election of the extension or health sciences representative to the Board of Governors was approved, with 95% voting in favor. The amendment went into effect October 29, 2013. Slightly more than 25% of those eligible voted, doubling the usual participation. She thanked Secretary Stolzenberg, Amy Baker and John Campbell from OIT, and Cheryl Phillips from Human Resources for their help with the electronic balloting process.
- She, Roy Nutter, Bob Griffith, and Jennifer Orlikoff participated in a summit on October 18 with their counterparts from Marshall University. PEIA issues and budget cuts were areas of common concern.
- She, Roy Nutter, Bob Griffith, Jennifer Orlikoff, Lisa Martin, Kerry Odell, and Ryan Campione visited Potomac State College on November 1. They were hosted by Provost Len Colelli. One concern expressed by the PSC faculty was the need to revitalize the STEM building.

- She encouraged faculty to select their textbooks by the deadline for each term; doing so aids buy-back decisions by the bookstores. She also encouraged faculty to take advantage of electronic alternatives to customized textbooks.
- Extension faculty and staff sent out West Virginia 63 tomato seeds to 20,000 gardeners in West Virginia and beyond.
- A follow-up meeting was held with PEIA Executive Director Ted Cheatam. A member of our local delegation will be looking at a legislative fix to expand benefits to other qualified adults, including domestic partners and same-sex partners.
- The Senate Bill 330 forum was well-attended and showcased the cooperation between faculty, staff, non-classified staff, students, and members of the community. The template of a letter that can be sent to legislators will be posted on the Faculty Senate Office web site at <http://facultysenate.wvu.edu/senate-bill-330>.
- Representatives from Senate leadership, Staff Council, non-classified staff, and students plan to travel to Charleston for the first day of the November interim session to speak with key legislators regarding SB 330.

5. Nick Perna, Chair, Senate Curriculum Committee, moved for approval of the following reports:

Annex I, New Courses and Course Changes. Motion carried.
 Annex II, Curriculum Changes for Wood Science and Technology. Motion carried.
 Annex III, Curriculum Changes for Mathematics at WVU-Tech. Motion carried.
 Annex IV, Curriculum Changes for the BS in Environmental and Natural Resources Economics. Motion carried.
 Annex V, Capstone Request for HN&F 401. Motion carried.
 Annex VI, Degree Proposal for Hospitality and Tourism Management. Motion carried.
 Annex VII, Monthly Alterations Report. Accepted.

6. Lisa Weihman, Chair, General Education Committee, presented the following:

Annex VIII, GEC Actions. Motion carried.
 Annex IX, GEC Audits. Accepted.

7. Narvel Weese, Vice President for Administration and Finance, provided an overview of the Evansdale Master Plan and the Fiscal Year 2013 financial statements. The statements can be viewed at the Administration and Finance web site, under Reports and Presentations.

8. Roy Nutter, ACF Representative, reported that SB 330 continues to be a primary concern. He encouraged Senators to use the letter that will be available on the Faculty Senate web site to contact legislators.

9. Robert Griffith, BOG Representative, reported the following:

He and Lisa DiBartolomeo presented the faculty constituency report to the Board of Governors on Thursday, November 7. Her part of the presentation covered the roles of faculty, types of faculty, and the promotion and tenure process. His presentation covered salaries. He compared WVU faculty salaries to those of our HEPC-designated peers using data from the Chronicle of Higher Education Almanac.

10. New Business

C.B. Wilson still needs volunteers for the University advisory panel. Faculty members are eligible to serve only if they are not already serving on their department or college P&T committee. Anyone interested in serving on the panel should e-mail Dr. Wilson or Dr. DiBartolomeo.

A motion was made and duly seconded to establish a special committee to review membership qualifications for the faculty assembly. Motion carried. Anyone interested in serving on this committee should contact Dr. DiBartolomeo.

11. The meeting adjourned at 4:51 p.m. to reconvene on Monday, December 9, 2013.

Judy Hamilton
Office Administrator

To: Faculty Senate Executive Committee
From: Nick Perna, Chair, Faculty Senate Curriculum Committee
Date: October 28, 2013
Re: New Courses and Course Changes

Eberly College of Arts and Sciences

New Courses:

Astronomy

ASTR 115. Honors Relativity. 1 Hr. PR: MATH 126 or 128 or 129 or 150 or 153 or 154 or 155 or 156 or total QRA of 24 with a minimum of 15 on part 1. Exploration of gravity as the geometry of four-dimensional space time; the legacy of Einstein. (Effective Date: Spring, 2014)

Rationale: Surveys of Honors Astronomy students indicate a clear need for a more in-depth investigation into Einstein's theories of relativity that is more mathematical and challenges more advanced students. This course is provided to honors students to broaden their options to complete their GEC requirements in the sciences.

Communication Studies

COMM 660. Communication in the Organization. 3-Hr. This course exposes students to the role of communication in the organizational environment with particular emphasis on its social science roots. (Effective Date: Spring, 2014)

Rationale: The Corporate and Professional Communication Master's Degree program in Extended Learning (EL) provides the people of West Virginia an opportunity to get the required education to be better prepared to improve their professional position. Many, while well prepared in their undergraduate studies, have minimal introduction to the academic study of communication. The course, Communication in the Organization (COMM 601) will provide students with the best scaffolding for an applied, graduate study of corporate and professional communication.

Psychology

PSYC 609. Ethics in Behavior Analysis. 3-Hr. Surveys the ethical guidelines and standards for behavior analysts. (Effective Date: Spring, 2014)

Rationale: The course is designed to meet the needs of PhD students in Behavior Analysis who are preparing for careers as professional behavior analysts. The course will allow students to fulfill new course requirements to sit for the national certification exam administered by the

Behavior Analysis Certification Board. Effective January 2015, students are required to complete 45 hours of classroom instruction in the area of Ethics and Professional Conduct in order to take the exam. The proposed course will be the only on-campus course that will meet these requirements, and our department is committed to providing face-to-face instruction to PhD students.

Biology

BIOL 415. Epigenetics. 3-Hr. PR: BIOL 219 or instructor permission. Explores the molecular mechanisms, phenotypic phenomena and current applications of epigenetics and the study of how genetic information is used and maintained. (Effective Date: Spring, 2014)

Rationale: The course will serve students as an elective in the biology major (B.A. or B.S.) and a Group 1 (Cellular and Molecular) elective for students applying for the B.S. Epigenetics is the study of cellular mechanisms that regulate how genetic information is used. There are other courses relating to the study of genetics (how heritable information is passed between generations and how that information is altered by mutation). However, epigenetics differs from genetics in that it relates to heritable changes in how genetic information is used that do not require changing the underlying information to adapt to changing environments. Our current understanding of these processes is largely molecular. The impacts of epigenetics are far-reaching, including the study of stem cells, medicine, forensics, psychology/sociology, ecology and evolution. Thus, this is an important addition to the biology department curriculum that will allow students to reevaluation information from other courses in light of epigenetic mechanisms and provide critical content for their future careers.

BIOL 426. Molecular Biology of Cancer. 3-Hr. PR: BIOL 219. Exploration of molecular pathways leading to the development of cancer with emphasis on gene expression, cell cycle regulation, and signaling pathways targeted in conventional therapies. (Effective Date: Spring, 2014)

Rationale: The study of cancer is a broad interest topic that will serve students with interests in molecular biology, biomedical research, and/or medical professions. For students seeking a major in biology, this course would serve as a general elective (B.A. or B.S.) and as a Group 1 (Cellular and Molecular) elective (B.S.). The topics covered in the course will help prepare students for admissions tests for medical or professional schools, as well as those students interested in graduate school.

Physics

PHYS 315. Advanced Physics Problem Solving. 1-Hr. PR: PHYS 314. Development of advanced problem solving techniques for all areas of physics. Topics covered include: mechanics, optics and waves, quantum mechanics, atomic physics, nuclear and particle physics, relativity and thermodynamics. (Effective Date: Spring, 2014)

Rationale: In addition to the problem solving techniques typically covered in the undergraduate curriculum, there are a number of advanced techniques that allow physicists to rapidly solve complex problems. By focusing exclusively on the development of these techniques, students will be prepared for the rigor of the more advanced undergraduate courses in electromagnetism, theoretical mechanics, quantum mechanics, optics and related fields.

PHYS 340. Experimental Space Physics. 3-Hr. PR: PHYS 112. Laboratory course consisting of an experimental project designed to acquaint students with current techniques for the design and construction of scientific payloads for suborbital and orbital space missions. (Effective Date: Spring, 2014)

Rationale: Students in physics currently have only one two-semester course that focuses on experimental techniques. This course will increase the number of available elective courses while also increasing the availability of hands-on, experiential learning courses. The course content is integrated with the department of physics' existing sounding rocket program.

Course Change:

From:

PHYS 250. Computational Physics. 2-Hr. An introduction to the computational techniques (programming in FORTRAN and computer graphics) to solve physics problems.

To:

PHYS 301. Computational Physics. 3-Hr. PR: MATH 261 and PHYS 314. Using basic numerical techniques to gain insight into physical systems. Numerical solutions for projectile motion, chaotic systems, and motion in a gravitational field (including N-body simulations). Numerical solutions to Maxwell's equations, the diffusion equation, the wave equation, Schrodinger's equation, and the hydrogen atom. Implementation of discrete Fourier Transforms and wavelet methods for analysis of time series. (Effective Date: Spring, 2014)

Rationale: Numerical methods have become a standard tool for solving complex problems in physics. This course will provide the student the essential tools necessary to use, understand, and create numerical solutions for specific physics problems yielding a greater understanding of the physics behind these complex systems. With changes in the field, the appropriate placement of the computational physics course in the curriculum has changed.

College of Agriculture, Natural Resources and Design

New Courses:

Animal Physiology

ANPH 440. Equine Exercise Physiology. 3-Hr. PR: A&VS 281 and ANPH 301. Evaluation of research in equine exercise science; physiological and mental adaptation to training; performance nutrition; unsoundness during training and competition; management and training regimes. (Effective Date: Fall, 2014)

Rationale: WVU faculty has completed an extensive review of the knowledge and skills requisite to graduating competent students that are marketable in the horse industry. Based on this review, we are revising the curriculum to reflect those needs. The new curriculum ensures students are exposed to the most current, evidence-based practices in the profession and have the skills necessary to gain competitive employment after graduation.

Animal and Veterinary Science

A&VS 370. Riding Theory and Techniques. 3-Hr. PR: A&VS 281. Advanced methods and techniques for performance in hunter and stock horse events; anatomical, physiological and psychological implications; preparation of horses and riders. (1-Hr Lec, 3-Hr Lab).

Rationale: WVU faculty has completed an extensive review of the knowledge and skills requisite to graduating competent students that are marketable in the horse industry. Based on this review, we are revising the curriculum to reflect those needs. The new curriculum ensures students are exposed to the most current, evidence-based practices in the profession and have the skills necessary to gain competitive employment after graduation. (Effective Date: Spring, 2014)

A&VS 372. Careers in the Equine Industry. 3-Hr. Provides an in-depth understanding of the careers available in the equine industry and prepares students to enter the job market. (Effective Date: Summer 1, 2014)

Rationale: This course provides students with specific information on career options within their field of study and teaches them application and interview skills not currently addressed in other courses in the Equine Studies minor.

A&VS 425. Princ. Of Thera. Horsemanship I. 3-Hr. Explore the history, organization, principles and procedures of an equine assisted activities and therapies program with the use of therapy horses for persons with disabilities. (Effective Date: Fall, 2014)

A&VS 426. Princ. Of Thera Horsemanship II. 3-Hr. PR: A&VS 425. Expand knowledge of therapeutic horsemanship based on their learning from AVS 425. Criteria for becoming a professional in equine assisted activities and therapy fields will be emphasized. (Effective Date: Spring, 2014)

A&VS 461. Racehorse Industry Tour. 3-Hr. Travel course designed to introduce students to the Thoroughbred and Standard-bred Racing Industries, including career opportunities and current events within it. (Effective Date: Summer 1, 2015)

A&VS 462. Performance Horse Industry Tour. 3-Hr. Travel course designed to introduce students to the various aspects of the Performance Horse Industry, including career opportunities and current events within it. (Effective Term: Summer 1, 2014)

A&VS 463. Equine Events Management. 3-Hr. Planning, marketing, facility preparations and horse show management necessary to run a successful nationally-sanctioned equine event. (Effective Date: Summer 1, 2014)

A&VS 481. Volunteerism for EAAT. 3-Hr. Discuss and demonstrate the importance of the role of the volunteer in the equine assisted activities and therapies fields. (Effective Date: Fall, 2014)

A&VS 482. Practicum for EAAT Instructor Cert. 3-Hr. Prepares therapeutic riding instructors for certification within the guidelines of the Professional Association of Therapeutic Horsemanship (PATH). (Effective Term: Fall, 2014)

Rationale: WVU faculty has completed an extensive review of the knowledge and skills requisite to graduating competent students that are marketable in the horse industry. Based on this review, we are revising the curriculum to reflect those needs. The new curriculum ensures students are exposed to the most current, evidence-based practices in the profession and have the skills necessary to gain competitive employment after graduation.

Course Changes:

From:

A&VS 281. Equine Management and Training. 3-Hr. Introduction to equine management and methods of training. Topics include handling, behavior, breeds, disciplines, tack, clipping, grooming, soundness, basic training, and an introduction to the horse industry. Short field trip will be required.

To:

A&VS 281. Intro to Equine Care and Use. 3-Hr. Survey of basic equine care, breeds, use, management, and behavior with a lab in equine safety and handling. (Effective Date: Spring, 2014) (3-Hr. Lec, 1-Hr. Lab)

Rationale: WVU faculty has completed an extensive review of the knowledge and skills requisite to graduating competent students that are marketable in the horse industry. Based on this review, we are revising the curriculum to reflect those needs. The new curriculum ensures students are exposed to the most current, evidence-based practices in the profession and have the skills necessary to gain competitive employment after graduation. The identification of this course as an introductory course aids in the development of a more progressive framework of courses, allowing this course to serve as a pre-requisite for more intensive upper-level courses, while the addition of a laboratory section is a necessary move to provide students the hands-on experience the industry demands, as well as to ensure students have safety training before completing more

advanced equine courses, such as those involving riding. This course will serve both students with no previous equine experience, as well as those well-versed in equine care.

From:

RESM 330. Equine Facility Development and Management: Overview of design, planning and building of safe, functional equine facilities. Business, legal, environmental and other issues involved with running an equine facility including contracts, budgeting, staffing and marketing. (Suggested prerequisite: A&VS 281 Introduction to Equine Care and Use)

To:

A&VS 330. Equine Facility Design and Mgmt. 3-Hr. PR: A&VS 281. Design of safe, functional equine facilities. Business, legal, environmental and other issues involved with running an equine facility. (Effective Term: Spring, 2014)

Rationale: This request is for a change of subject code only. This course was previously housed in Resource Management and taught by an adjunct instructor, but in the spring of 2011 teaching responsibilities were assigned to a full-time faculty member in Animal and Nutritional Sciences. It is also a required course for the Equine Management Minor. (This change simply alters the home base for this course).

Animal Production

From:

ANPR 344. Light Horse Science. II. 3-Hr. PR: ANNU 260. Application of breeding, nutrition, physiology, and pathology to production and management of light horses.

To:

ANPR 344. Advanced Horse Management. 4-Hr. PR: A&VS 281. Application of scientific principles and concepts in genetics, breeding, nutrition, reproduction, and anatomy to efficient production and management of horses. (2-Hr. Lec, 1-Hr. Lab) (Effective Term: Spring, 2014)

Rationale: WVU faculty has completed an extensive review of the knowledge and skills requisite to graduating competent students that are marketable in the horse industry. Based on this review, we are revising the curriculum to reflect those needs. The new curriculum ensures students are exposed to the most current, evidence-based practices in the profession and have the skills necessary to gain competitive employment after graduation.

Resource Management

RESM 450. Land Use Planning Law. 3-Hr. Focus is on identification and understanding of legal issues related to planning and land use. This involves understanding rights, regulations, and

responsibilities associated with land use, planning and related activities. (Effective Date: Spring, 2014)

Rationale: Land Use Planning Law will be an important course in the Agricultural and Resource Economics program. This course will be required under the Agriculture, Environmental & Resource Law Minor that is currently being developed. This course also will serve as a restricted elective in two majors in the program (Agribusiness Management plus Environmental and Natural Resource Economics). Along with another newly proposed course (RESM 455 Practice of Land Use Planning), this sequence of courses will provide an option for studies in local development processes for these and other majors.

RESM 455. Practice of Land Use Planning. 3-Hr. Examines comprehensive land use planning including planning's origin and evolution plus the processes used to create and implement a plan. Focus is on land use and how it relates to other issues. (Effective Date: Spring, 2015)

Rationale: This course is will serve three majors in the Division of Resource Management – two existing majors (Landscape Architecture and Environmental and Natural Resource Economics) and a proposed new major (Energy and Environmental Management). It will serve as an elective or restricted elective in each major. Along with another newly proposed course (RESM 450 Land Use Planning Law), this series of courses will provide an option for studies in local development processes for these three majors in addition to other majors. RESM 450 compliments RESM 455 but is not intended as a pre-requisite.

College of Creative Arts

New Courses:

ART

ART 272. Designing for Multimedia. 3-Hr. This course explores 2D and 4D visual design in a digital media context. Students learn the foundations of visual design including composition, hierarchy, unity and color theory. These concepts are explored through digital media tools. (Effective Term: Fall, 2014)

Rationale: This course is part of a proposed Interactive Media Design Minor, which is a blended minor shared by the School of Journalism and College of Creative Arts. The course, and the minor, is intended to close an existing gap between the Creative Arts and Journalism by providing a curriculum supplement for journalism students that delivers emergent digital and interactive design skills while expanding learning opportunities for Art and Design students in narrative methodologies, multimedia and visual storytelling. Through collaboration and shared support, both programs' students will acquire critical missing skills in interactive design and visual narrative and new technologies, making them highly competitive in an environment increasingly determined by digital and visual media.

ART 372. Interactive Design. 3-Hr. PR: ART 272, ART 270 or VISJ 210. Interactive Design is a multimedia studio art course addressing core principles of interactivity, non-linear narration and interaction design in art and culture. (Effective Term: Fall, 2014)

Rationale: This course is part of a proposed Interactive Media Design Minor, which is a blended minor shared by the School of Journalism and College of Creative Arts. The course, and the minor, is intended to close an existing gap between the Creative Arts and Journalism by providing a curriculum supplement for journalism students that delivers emergent digital and interactive design skills while expanding learning opportunities for Art and Design students in narrative methodologies, multimedia and visual storytelling. Through collaboration and shared support, both programs' students will acquire critical missing skills in interactive design and visual narrative and new technologies, making them highly competitive in an environment increasingly determined by digital and visual media.

ART 472. Advanced Interactive Design. 3-Hr. PR: ART 272, ART 372, JRL 225 and VISJ 322. This course is a semester long, self-directed project focusing on specific interactive design applications in conjunction with advice and consultation from the instructor. (Effective Term: Fall, 2014)

Rationale: This course is part of a proposed Interactive Media Design Minor, which is a blended minor shared by the School of Journalism and College of Creative Arts. The course, and the minor, is intended to close an existing gap between the Creative Arts and Journalism by providing a curriculum supplement for journalism students that delivers emergent digital and interactive design skills while expanding learning opportunities for Art and Design students in narrative methodologies, multimedia and visual storytelling. Through collaboration and shared support, both programs' students will acquire critical missing skills in interactive design and visual narrative and new technologies, making them highly competitive in an environment increasingly determined by digital and visual media.

Music

MUSC 100. Fundamentals of Music Theory. 1-Hr. An online course designed to prepare students to enter MUSC 162 (Written Theory I). The course focuses on basic musical concepts including notation of pitch and rhythm, intervals, scales and modes, and keys and key signatures. (Effective Term: Summer, 2014)

Rationale: MUSC 100 is an elective preparatory course aimed at incoming music students. The course will help students better matriculate into MUSC 162 (Written Theory I) thereby increasing the retention rate of the incoming freshmen class.

Statler College of Engineering and Mineral Resources

New Courses:

Chemical Engineering

ChE 566. Electronic Materials Processing. 3-Hr. PR: Graduate standing in Engineering, Physics, Chemistry, or instructor consent. Design and application of thermal, plasma, and ion assisted processing methodologies; design and function of key process tools and components; vacuum technology; solid state, gas phase, surface, and plasma chemistry underpinnings; thin film nucleation, growth, and etching; effects of processing methods and conditions on materials properties. (Effective Term: Spring, 2014)

Rationale: This course, currently offered as ChE 466, is taken by seniors interested in materials and by MS students who are primarily engaged in materials research. Course content is routinely updated and covers the major fabrication tools used in the WVU Shared User Facility associated with semiconductor processing. For students with a chemistry, physics, or materials background, this course integrates concepts learned in other courses to provide an in-depth understanding of the processes used to fabricate electronic and optoelectronic devices. For students with a general engineering background, this course expands their materials background and provides and application of the general engineering concepts of thermodynamics, reactions, and transport. The proposed course will allow PhD students the same opportunity and will enhance course content for MS students.

Industrial Management Systems Engineering

IENG 557: Geometric Programming. 3-Hr. PR: IENG 350 or Instructor Consent. Introduction to the primal and dual solution techniques for geometric programming problems. Focus on the development of design relationships for cost optimization or profit maximization problems. (Effective Term: Spring, 2014)

Rationale: The course would be an elective in both the Decision Sciences and the Manufacturing Options in the IMSE graduate programs. The course is on geometric programming, which is unique among optimization techniques as it permits the development of design relationships and permits the determination of the impact of the individual cost terms upon the overall objective function in terms of the input constants which are not readily obtainable by other optimization techniques. Optimization of cost or the maximization of profits and the development of design relationships are important aspects of Industrial Engineering. Geometric programming is a unique optimization tool not currently taught in the Decision Sciences Option and is an important cost estimating tool for the Manufacturing Option. The course is now being taught for the third time as a special topics course and now requires a permanent number.

Mechanical & Aerospace Engineering

MAE 565. Artificial Intelligence Techniques in Mechanical and Aerospace Engineering. 3-Hr. Introduction to solving complex problems in mechanical and aerospace engineering using genetic (evolutionary) algorithms, fuzzy logic-based modeling and control, and artificial neural networks. (Effective Term: Spring, 2014)

Rationale: The course provides mechanical and aerospace graduate students with advanced computational methodologies and tools for complex system design, optimization, modeling, and control. The biologically inspired techniques covered offer solutions to problems that cannot

typically be solved in efficient ways using classic approaches included in the current curricula. The course was designed to be relevant to wide areas of mechanical and aerospace engineering applications and to facilitate immediate utilization to graduate student research.

Course Change:

From:

MAE 731. Fundamentals of Turbulent Flow. 3-Hr. PR: MAE 532 or Consent. Basic experimental data. Application of semi-empirical theories to pipe, jet, and boundary layer flow. Turbulent heat and mass transfer theory.

To:

MAE 636 Fundamentals of Turbulent Flow. 3-Hr. PR: MAE 532 or consent. Statistical theories of turbulence and recent applications. Basic experimental data and length and time scale analysis. Application of semi-empirical theories to pipe, jet, and boundary-layer flow. (Effective Term: Spring, 2014)

Rationale: This course has been taught for well over the past 20 years, as either the current number, MAE 731 or as MAE 412 prior to the University-wide course renumbering process. However, the course has also been designated as a Departmental graduate "core class" in the fluid mechanics and aerodynamics technical area within the MAE graduate program. So to make the course number more properly fit the level of the material taught in the course (primarily at the Master's level, and to make the course number such that the MS students are automatically allowed to take the course, we are proposing to change the course number from the existing number (731) to a 600 level course number.

School of Law

New Courses:

LAW 617. Geneva Study Abroad. 1-3 Hr. A 2-component, study abroad course with initial classroom preparation and subsequent travel to Geneva. This course addresses key subjects and themes in modern international trade regulation. (Effective Term: Spring, 2014)

Rationale: When approved, this course should be listed as "Repeatable for Credit" to permit student registration for the spring classroom component and also for the summer travel component. The College of Law Academic Planning Committee has determined the Geneva Study Abroad course to be educationally valuable in training students to work in an increasingly global legal environment. It offers students the opportunity to develop knowledge of the international trade regulatory regime and to visit international organizations located in Geneva, Switzerland that are involved in international trade regulation and dispute resolution. This program is significant because of the growing importance of international trade to the U.S. and world economies, and because Geneva is a regulatory center for international trade. The

program's location in French-speaking Switzerland would also offer students the opportunity to experience a unique foreign culture first-hand.

LAW 618. Crim Procedure: Investigation. 3-Hr. Designed to cover all facets of the investigatory stage of criminal procedure: the right to representation by counsel, rules surrounding police practices and procedures of search and seizure, interrogation and identification. (Effective Term: Spring, 2014)

Rationale: The course will replace LAW 761, which has been taught as a 4-credit hour course for many years. LAW 761 covered both criminal law investigation and criminal law adjudication. Because these criminal law topics are different, the College of Law's Academic Planning Committee believes the course would be more educationally valuable if the content were expanded and the topics split between two separate courses for 3 credit hours each. LAW 618 will focus on the investigation aspects, and it is the first of the two courses to be submitted. It is basically offered to introduce students to how criminal investigations are conducted and the rules and standards by which police practices are measured. It is an important part of the law school curriculum because criminal investigation is a core subject for legal education and for state bar exams. LAW 761 will be dropped.

LAW 624. Advanced Legal Research. 2-Hr. The course focuses on advanced legal research methodologies and strategies within the context of federal, state, and local law. It is designed to prepare law students for research in practical settings. (Effective Term: Spring, 2014)

Rationale: The College of Law faculty has approved Advanced Legal Research for inclusion in the law school curriculum and determined it to be extremely valuable in overall legal education. The course is designed to build upon basic legal research instruction and serves to enhance student skills for more accurate and efficient research, which is a vital part of any law practice, whether general or specialized.

School of Nursing

New Course:

NSG 460: Care of the Critically Ill Patient. 4-Hr. PR: NSG 312 minimum grade C, NSG 411 minimum grade C, NSG 450 minimum grade C. Focuses on the professional nursing role in supporting individuals and families experiencing complex physiological alterations in health. Paired with clinical experiences supporting individuals and families in critical care settings. (Effective Term: Spring, 2014)

Rationale: In the Bachelor of Science in Nursing (BSN) program, didactic and clinical courses are being combined into courses that have both didactic and clinical components. The combined didactic/clinical courses will provide a more integrated approach and will enhance the student's ability to think critically about patient care situations. NSG 460, Care of the Critically Ill Patient, will replace NSG 421 and the critical care clinical portion of NSG 425 in the pre-licensure BSN program. It will build on previous coursework with patients across the lifespan who have complex health problems that require intensive care in the acute care setting. The course will

prepare the student to integrate evidence, clinical judgment, inter-professional perspectives, and patient preferences in planning and implementing safe patient care, and evaluating outcomes of care in complex systems.

University Libraries

New Course:

ULIB 200. Research for Non-Profits. 3-Hr. The course will develop research skills including precise, effective use of discipline specific databases and grant-seeking resources. Students will apply these skills working in teams to produce a research portfolio for a local non-profit organization. (Effective Term: Spring, 2014)

Rationale: This course will directly contribute to three of the University's goals in the 2020 plan: to engage students in a challenging academic environment; to excel in research, creative activity, and innovation; and to enhance the well-being of the people of West Virginia. ULIB 200 will also complement our existing basic library research course by challenging students to develop more advanced library research skills, which include more effective use and selection of discipline specific and grant seeking resources. The course will develop students' critical thinking/information literacy skills through the evaluation of academic research and the application of research to civic needs. Applying their skills outside of the classroom, students will assist community non-profits by gathering information regarding potential grant sources and other information to support their missions.

Proposed Curriculum Revision

**B.S. in Wood Science and Technology
Division of Forestry and Natural Resources
Davis College of Agriculture, Natural Resources, and Design**



Submitted by:

**Jingxin Wang
Professor and Former Program Coordinator**

And

**David DeVallance
Assistant Professor and Program Coordinator
Wood Science and Technology**

First Submitted on June 4, 2011

Resubmitted on April 9, 2012

Revised on October 10, 2012, September 17, 2013, and November 4, 2013

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Executive Summary

Students in the B.S. in Wood Science and Technology major must complete 128 hours. Under the proposed curriculum revision, this will include 95 hours of core (including GEC) courses plus 33 hours in one of four Areas of Emphasis. The program is accredited by the Society of Wood Science and Technology.

- The goals of the proposed curriculum revision are to (1) keep the program up to date with changes within the profession and the industries it serves, and (2) boost enrollment in the program by making it more attractive to Millennial Generation students.
- We currently have separate capstone courses (WDSC 423 and WDSC 460) for our two existing Areas of Emphasis. Both courses represent outdated topical areas. We request approval to change our required capstone experience to two subsequent semesters of 2-hour “capstone project” courses (WDSC 480 and 481) for all Areas of Emphasis. The capstone projects format allows more flexibility and will provide students with a faculty-guided experience that better integrates their previous learning in the form of a hands-on, “real world” project. The capstone courses have been approved, since submission of this curriculum revision proposal.
- We are dropping a 1-hour seminar (WDSC 494) as a required course. The oral presentations that were previously included in this course will be included in WDSC 481, *Capstone Project 2*.
- We propose dropping WDSC 460 as a requirement in the Wood Processing Area of Emphasis, to be replaced by the two Capstone Project courses (WDSC 480 and 481) described previously.
- We ask approval for revisions to the Forest Utilization Area of Emphasis that include dropping CE 200 and WDSC 423 as requirements and adding FMAN 330 as a requirement.
- We request approval of a new Area of Emphasis in Renewable Materials Marketing to be added to the curriculum. This Area of Emphasis has been endorsed by the Davis College of Agriculture and approved by the Office of Academic Affairs (by Associate Provost Dr. Dooley).

We request approval of a new Area of Emphasis in Sustainable Low-Rise Residential Construction to be added to the curriculum. This Area of Emphasis has been endorsed by the Davis College of Agriculture and approved by the Office of Academic Affairs (by Associate Provost Dr. Dooley).

- The curriculum changes we propose meet the accreditation standards of the Society of Wood Science and Technology (see attached SWST Accreditation Handbook, Appendix B).

- We propose a revision to the Minor in Wood Science and Technology (U045). The revision to the Minor has been approved by the Senate Curriculum Committee and was forwarded to the Office of Academic Affairs.
- We request approval of a new Minor in Sustainable Low-Rise Residential Construction. The revision to the Minor has been approved by the Senate Curriculum Committee and was forwarded to the Office of Academic Affairs.

Current and revised catalog descriptions are appended at the end of this document (Appendix B).

Proposed Changes to the Core Requirements

B.S. IN WOOD SCIENCE AND TECHNOLOGY

The wood science and technology curriculum is designed to prepare students for the challenges of a career in the wood and biomaterials products and related industries. Society must provide the basic needs for materials for furniture, paper, packaging, building materials, renewable energy, housing, and other products for sustaining a rapidly growing population. At the same time, protection of the environment requires proper use of natural resources. One of the most sensible alternatives for meeting material needs in an environmentally safe manner is by use of wood and other biomaterials as a raw material. To meet society's needs, the wood products industry must harvest timber in an environmentally sound manner and make more efficient use of the harvested forest resources. This responsibility requires development of innovative approaches to obtaining, manufacturing, using, and recycling wood products. The wood science and technology curriculum focuses on these aspects of the industry. The program is accredited by the Society of Wood Science and Technology.

The changes we propose to the core curriculum involve our capstone course requirements. The present curriculum includes separate capstone courses for each of our two areas of emphasis. These two courses deal with specific topics relevant to the particular area of emphasis. We propose consolidating the capstone experience into two 2-hour "capstone project" courses to be taken in subsequent fall and spring semesters. Adopting a capstone project format will lend flexibility that will require students to synthesize what they have learned to complete a project in their area of interest. We propose integrating an existing 1-hour wood science seminar course into the capstone project courses.

The specific changes we propose to the core curriculum are:

1. Add two new courses, WDSC 480, *Capstone Project 1* (2 hrs) and WDSC 481, *Capstone Project 2* (2 hrs) to the curriculum to fulfill the University's requirement for a capstone experience. New course proposals for WDSC 480 and WDSC 481 have been submitted on line as part of the proposed curriculum change. The capstone courses have been approved by the Faculty Senate.

Justification: We currently have separate Capstone Courses for each of our Areas of Emphasis. Both are becoming less relevant to a changing profession than they were when first introduced into the curriculum. Addition of WDSC 480 and WDSC 481 allow us to consolidate the two existing and two new areas of emphasis.

2. Drop WDSC 494, *Seminar: Issues in Wood Industries*, as a required course.

Justification: The proposed WDSC 480, *Capstone Project 1*, will incorporate what is currently included in WDSC 494.

Proposed Changes

FOREST UTILIZATION AREA OF EMPHASIS

The Forest Utilization Area of Emphasis prepares graduates for careers in timber procurement, timber harvesting, forest engineering, and primary processing of wood products.

The proposed changes are prompted by our plan to consolidate separate Capstone Courses into a capstone project format and by changes proposed by the faculty in Forest Resources Management (FRM) that affect this Area of Emphasis in our program. The changes we propose are:

1. Drop CE 200, *Land Surveying*, as a requirement.

Justification: CE 200 is currently required of students in the FRM curriculum as well as Wood Science and Technology. FRM is dropping CE 200 as a requirement, which we believe will result in the course being eliminated by the Department of Civil and Environmental Engineering.

2. Add FMAN 330, *Principles of Forest Economics*.

Justification: The Forest Resources Management faculty recently submitted a proposed revision to the Minor in Forest Resources Management that will make FMAN 330 a requirement. Our Forest Utilization students are required to complete all requirements for the FRM Minor. We wish to continue this practice and agree with our colleagues that the addition of FMAN 330 strengthens both the minor and the Forest Utilization Area of Emphasis. In addition, the FRM faculty proposed that FMAN 330 be made a prerequisite for FMAN 433, a course we wish to continue as a requirement for the Forest Utilization Area of Emphasis.

3. Drop WDSC 423, *Forest Roads*, as a curriculum requirement.

Justification: WDSC 423, the Capstone Course for the Forest Utilization Area of Emphasis, will be replaced by WDSC 480, *Capstone Project 1* and WDSC 481, *Capstone Project 2*. The subject matter covered in WDSC 423 is not as relevant as it was when the course was first introduced approximately 20 years ago. A common Capstone Project course also makes more sense in terms of more efficient use of faculty resources within the program. Additionally, some of the relevant subjects in WDSC 423 will be covered in WDSC 422.

The current and proposed academic requirements for the Forest Utilization Area of Emphasis follow. The new suggested sequence of courses includes courses required for the major and courses meeting the West Virginia University General Education Curriculum (GEC). Please note that there are no required GEC classes; however, some of the courses required for the Area of Emphasis may also fulfill GEC objectives. The actual program of study for each student will be established by the student in consultation with the academic advisor.

AREA OF EMPHASIS – FOREST UTILIZATION

Current Requirements	Hrs	Proposed Requirements	Hrs
<u>General Education Curriculum</u>		<u>General Education Curriculum</u>	
GEC 1 – Communications		GEC 1 - Communications	
ENGL 101	3	ENGL 101	3
ENGL 102	3	ENGL 102	3
Intensive English Writing (W) Course	3	Intensive English Writing (W) Course	3
GEC 2 – Basic Math and Science		GEC 2 – Basic Math and Science	13-14
MATH 150	3	GEC 3 – The Past and Its Traditions	3
BIOL 101 <i>and</i> BIOL 103	4	GEC 4 – Contemporary Society	3-4
CHEM 111 <i>or</i> CHEM 115	4	GEC 5 – Artistic Expression	3
PHYS 101	4	GEC 6 – The Individual in Society	
STAT 211	3	FOR 101 <i>or</i> equivalent	1
GEC 3 – The Past and Its Traditions		Other GEC 6	3
WDSC 100 <i>or</i> equivalent	3	GEC 7 – American Culture	3
GEC 4 – Contemporary Society		GEC 8 – Western Culture	3
ECON 201	3	GEC 9 – Non-Western Culture	3
GEC 5 – Artistic Expression			
Elective	3		
GEC 6 – The Individual in Society			
Elective	3		
FOR 101 <i>or</i> equivalent	1		
GEC 7 – American Culture			
Elective	3		
GEC 8 – Western Culture			
ECON 202	3		
GEC 9 – Non-Western Culture			
Elective	3		

Wood Science Core

FOR 203, <i>Careers in Natural Resources 2</i>	1
FOR 205, <i>Dendrology</i>	3
FOR 240, <i>Intro Computing -Ntrl Resource</i>	3
FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>	3
FMAN 222, <i>Forest Mensuration</i>	4
WDSC 223, <i>Wood Anatomy and Structure</i>	3
WDSC 232, <i>Wood Grading & Procurement</i>	3
WDSC 340, <i>Physical Properties of Wood</i>	3
WDSC 341, <i>Wood Mechanics</i>	3
WDSC 362, <i>Forest Products Decision-Making</i>	4
WDSC 413, <i>Wood Chemistry</i>	3
WDSC 422, <i>Forest Products Harvesting</i>	3
WDSC 465, <i>Wood-Based Composite Materials</i>	3
WDSC 491, <i>Professional Field Experience</i>	3
WDSC 494, <i>Seminar: Issues in Wood Industries</i>	1

Wood Science Core

MATH 150*	3
BIOL 101* and BIOL 103*	4
CHEM 111* or CHEM 115*	4
PHYS 101*	4
STAT 211*	3
ECON 201*	3
ECON 202*	3
FOR 203, <i>Careers in Natural Resources 2</i>	1
FOR 205, <i>Dendrology</i>	3
FOR 240, <i>Intro Computing -Ntrl Resource</i>	3
FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>	3
FMAN 222, <i>Forest Mensuration</i>	4
WDSC 100, <i>Forest Resources in U.S. History*</i>	3
WDSC 223, <i>Wood Anatomy and Structure</i>	3
WDSC 232, <i>Wood Grading & Procurement</i>	3
WDSC 340, <i>Physical Properties of Wood</i>	3
WDSC 341, <i>Wood Mechanics</i>	3
WDSC 362, <i>Forest Products Decision-Making</i>	4
WDSC 413, <i>Wood Chemistry</i>	3
WDSC 422, <i>Forest Products Harvesting</i>	3
WDSC 465, <i>Wood-Based Composite Materials</i>	3
WDSC 491, <i>Professional Field Experience</i>	3
WDSC 480, <i>Capstone Project 1 (capstone)</i>	2
WDSC 481, <i>Capstone Project 2 (capstone)</i>	2

* May also count for GEC Credit.

Forest Utilization Area of Emphasis

CE 200, <i>Land Surveying</i>	3
FHYD 444, <i>Watershed Management</i>	3
FOR 326, <i>Remote Sensing</i>	3
FMAN 212, <i>Forest Ecology</i>	3
FMAN 311, <i>Silvicultural Systems</i>	3
FMAN 433, <i>Forest Management</i>	4
WDSC 423, <i>Forest Roads (capstone)</i>	4
WMAN 234, <i>Forest Wildlife Management</i>	3
Restricted Electives	10

Forest Utilization Area of Emphasis

FHYD 444, <i>Watershed Management</i>	3
FOR 326, <i>Remote Sensing</i>	3
FMAN 212, <i>Forest Ecology</i>	3
FMAN 311, <i>Silvicultural Systems</i>	3
FMAN 330, <i>Principles-Forestry Economics</i>	3
FMAN 433, <i>Forest Management</i>	4
WMAN 234, <i>Forest Wildlife Management</i>	3
Restricted Electives	11

Total Hours 128

Total Hours 128-152

Shaded rows highlight courses that will no longer be required in the proposed curriculum.

Shaded rows highlight courses that will be added as requirements in the proposed curriculum.



MEMORANDUM

TO: Dr. Jingxin Wang

FROM: Dr. John Brooks, Program Coordinator of Forest Management

SUBJECT: Permission to list FMAN 330 as a requirement for WST major with area of emphasis in Forest Utilization

DATE: April 4, 2012

I am writing this memo to provide documentation to your request to require students in the Wood Science and Technology program to take FMAN 330 *Principles of Forest Economics* as part of a revised curriculum. I do not feel this will be a problem in accommodating your request and I support your request to add FMAN 330 as a required course in your curriculum.

A handwritten signature in black ink, appearing to read 'John Brooks', written over a light gray rectangular background.

John Brooks, Program Coordinator

Proposed Change

WOOD PROCESSING AREA OF EMPHASIS

THE WOOD PROCESSING AREA OF EMPHASIS PREPARES STUDENTS FOR CAREERS THAT INCLUDE, BUT ARE NOT LIMITED TO PRODUCTION OF WOOD PRODUCTS, INCLUDING PRIMARY PRODUCTS, ARCHITECTURAL WOODWORK, FURNITURE AND CABINETS, AND COMPOSITE MATERIALS; MARKETING WOOD PRODUCTS; DESIGN OF WOOD-BASED BUILDING COMPONENTS, AND RESEARCH. THE ONLY PROPOSED CHANGE TO THIS AREA OF EMPHASIS IS TO THE CAPSTONE EXPERIENCE.

1. Drop WDSC 460, *Plant Layout for Wood Industries*, as a required course.

Justification: WDSC 460, the Capstone Course and “W” Course for the Wood Processing Area of Emphasis, is replaced by WDSC 480, *Capstone Project 1* and WDSC 481, *Capstone Project 2*. The subject matter covered in WDSC 460 is not as relevant as it was when the course was first introduced nearly three decades ago. A common Capstone Project course also makes more sense in terms of more efficient use of faculty resources within the program

The current and proposed academic requirements for the Wood Processing Area of Emphasis follow. The new suggested sequence of courses includes courses required for the major and courses meeting the West Virginia University General Education Curriculum (GEC). Please note that there are no required GEC classes; however, some of the courses required for the Area of Emphasis may also fulfill GEC objectives. The actual program of study for each student will be established by the student in consultation with the academic advisor.

AREA OF EMPHASIS – WOOD PROCESSING

Current Requirements	Hrs	Proposed Requirements	Hrs
<u>General Education Curriculum</u>		<u>General Education Curriculum</u>	
GEC 1 - Communications		GEC 1 - Communications	
ENGL 101	3	ENGL 101	3
ENGL 102	3	ENGL 102	3
†		Intensive English Writing (W) Course	3
GEC 2 – Basic Math and Science		GEC 2 – Basic Math and Science	13-14
MATH 150	3	GEC 3 – The Past and Its Traditions	3
BIOL 101 <i>and</i> BIOL 103	4	GEC 4 – Contemporary Society	3-4
CHEM 111 <i>or</i> CHEM 115	4	GEC 5 – Artistic Expression	3
PHYS 101	4	GEC 6 – The Individual in Society	
STAT 211	3	FOR 101 <i>or</i> equivalent	1
GEC 3 – The Past and Its Traditions		Other GEC 6	3
WDSC 100 <i>or</i> equivalent	3	GEC 7 – American Culture	3
GEC 4 – Contemporary Society		GEC 8 – Western Culture	3
ECON 201	3	GEC 9 – Non-Western Culture	3
GEC 5 – Artistic Expression			
Elective	3		
GEC 6 – The Individual in Society			
Elective	3		
FOR 101 <i>or</i> equivalent	1		
GEC 7 – American Culture			
Elective	3		
GEC 8 – Western Culture			
ECON 202	3		
GEC 9 – Non-Western Culture			
Elective	3		

† WDSC 460 (listed under the Area of Emphasis requirements) is the current Intensive English Writing (W) Course.

Wood Science Core

FOR 203, <i>Careers in Natural Resources 2</i>	1
FOR 205, <i>Dendrology</i>	3
FOR 240, <i>Intro Computing -Ntrl Resource</i>	3
FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>	3
FMAN 222, <i>Forest Mensuration</i>	4
WDSC 223, <i>Wood Anatomy and Structure</i>	3
WDSC 232, <i>Wood Grading & Procurement</i>	3
WDSC 340, <i>Physical Properties of Wood</i>	3
WDSC 341, <i>Wood Mechanics</i>	3
WDSC 362, <i>Forest Products Decision-Making</i>	4
WDSC 413, <i>Wood Chemistry</i>	3
WDSC 422, <i>Forest Products Harvesting</i>	3
WDSC 465, <i>Wood-Based Composite Materials</i>	3
WDSC 491, <i>Professional Field Experience</i>	3
WDSC 494, <i>Seminar: Issues in Wood Industries</i>	1

Wood Processing Area of Emphasis

WDSC 330, <i>Wood Machining</i>	3
WDSC 337, <i>Wood Adhesion and Finishing</i>	3
WDSC 351, <i>Forest Products Protection</i>	3
WDSC 460, <i>Plant Layout (capstone & "W" course)</i>	3
University-approved Minor	15
Restricted Electives	12

Total Hours 128

Shaded rows highlight courses that will no longer be required in the proposed curriculum.

Wood Science Core

MATH 150*	3
BIOL 101* and BIOL 103*	4
CHEM 111* or CHEM 115*	4
PHYS 101*	4
STAT 211*	3
ECON 201*	3
ECON 202*	3
FOR 203, <i>Careers in Natural Resources 2</i>	1
FOR 205, <i>Dendrology</i>	3
FOR 240, <i>Intro Computing -Ntrl Resource</i>	3
FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>	3
FMAN 222, <i>Forest Mensuration</i>	4
WDSC 100, <i>Forest Resources in U.S. History*</i>	3
WDSC 223, <i>Wood Anatomy and Structure</i>	3
WDSC 232, <i>Wood Grading & Procurement</i>	3
WDSC 340, <i>Physical Properties of Wood</i>	3
WDSC 341, <i>Wood Mechanics</i>	3
WDSC 362, <i>Forest Products Decision-Making</i>	4
WDSC 413, <i>Wood Chemistry</i>	3
WDSC 422, <i>Forest Products Harvesting</i>	3
WDSC 465, <i>Wood-Based Composite Materials</i>	3
WDSC 491, <i>Professional Field Experience</i>	3
WDSC 480, <i>Capstone Project 1 (capstone)</i>	2
WDSC 481, <i>Capstone Project 2 (capstone)</i>	2

* May also count for GEC Credit.

Wood Processing Area of Emphasis

WDSC 330, <i>Wood Machining</i>	3
WDSC 337, <i>Wood Adhesion and Finishing</i>	3
WDSC 351, <i>Forest Products Protection</i>	3
University-approved Minor	15
Restricted Electives	9

Total Hours 128-152

Shaded rows highlight courses that will be added as requirements in the proposed curriculum.

Proposed New

RENEWABLE MATERIALS MARKETING AREA OF EMPHASIS

The Renewable Materials Marketing Area of Emphasis prepares students for a career in marketing of wood and other renewable materials and products. Specific careers may include retail or wholesale marketing, sales, purchasing, or distribution of products.

Justification: Over the past decade or two, a number of graduates of the Wood Science and Technology program have entered careers in wood products marketing. The curriculum lacked any specific focus to meet the needs of these students. Forty-seven percent of the industrial raw materials produced in the United States come from wood (i.e., biomaterials). It is estimated that in 2011, the U.S. will produce 343 million cubic meters and consume 355 million cubic meters of wood and wood products. Five percent of the total U.S. manufacturing gross domestic product (GDP) is attributed to the forest products industry. Additionally, wood product manufacturing (not including paper and furniture manufacturing) employs approximately 342,000 U.S. workers (January, 2011). Given wood is a major industry that is essential to the economic stability of the U.S., and the needs to enhance the global competitiveness of the U.S. wood products, the objective of the Renewable Materials Marketing Area of Emphasis is to provide students with the skills and knowledge necessary for future employment in wood products business and marketing related industries. To achieve this objective, we will educate students on various aspects of business, marketing and accounting principles, with a focus on the emerging green building sector and sustainable attributes of wood-based products.

The proposed area of emphasis is detailed on the following page. Supporting letters from departments that offer the courses included in this minor follow. The proposed area of emphasis also includes a new course specific to marketing wood products and other renewable materials:

New Course Proposal:

WDSC 470, *Marketing Forest Products*, will be a required course in the Renewable Materials Marketing Area of Emphasis. A course proposal has been submitted electronically as part of the curriculum change package.

The proposed academic requirements for the Renewable Materials Marketing Area of Emphasis follow. The new suggested sequence of courses includes courses required for the major and courses meeting the West Virginia University General Education Curriculum (GEC). Please note that there are no required GEC classes; however, some of the courses required for the Area of Emphasis may also fulfill GEC objectives. The actual program of study for each student will be established by the student in consultation with the academic advisor.

[†] The addition of the AoE in Renewable Materials and the WDSC 470 course were discussed during a meeting between faculty and administrators of the Division of Forestry and Natural Resources and Dr. Wood (College of Business and Economics, Marketing Department) and Dr. Karen Donavan

(College of Business and Economics, Associate Dean for Academic Affairs). The results of the meeting were that the new AoE in Renewable Materials and the WDSC 470 course would not create any problem for B&E in their upcoming accreditation (see email correspondence from Dr. Karen France (now Donovan) regarding this matter).

AREA OF EMPHASIS – RENEWABLE MATERIALS MARKETING

Current Requirements	Hrs	Proposed Requirements	Hrs
New Area of Emphasis No Current Requirements		<u>General Education Curriculum</u>	
		GEC 1 - Communications	
		ENGL 101	3
		ENGL 102	3
		Intensive English Writing (W) Course	3
		GEC 2 – Basic Math and Science	13-14
		GEC 3 – The Past and Its Traditions	3
		GEC 4 – Contemporary Society	3-4
		GEC 5 – Artistic Expression	3
		GEC 6 – The Individual in Society	
		FOR 101 <i>or</i> equivalent	1
		Other GEC 6	3
		GEC 7 – American Culture	3
		GEC 8 – Western Culture	3
		GEC 9 – Non-Western Culture	3

New Area of Emphasis
No Current Requirements

Wood Science Core

MATH 150*	3
BIOL 101* and BIOL 103*	4
CHEM 111* or CHEM 115*	4
PHYS 101*	4
STAT 211*	3
ECON 201*	3
ECON 202*	3
FOR 203, <i>Careers in Natural Resources 2</i>	1
FOR 205, <i>Dendrology</i>	3
FOR 240, <i>Intro Computing -Ntrl Resource</i>	3
FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>	3
FMAN 222, <i>Forest Mensuration</i>	4
WDSC 100, <i>Forest Resources in U.S. History*</i>	3
WDSC 223, <i>Wood Anatomy and Structure</i>	3
WDSC 232, <i>Wood Grading & Procurement</i>	3
WDSC 340, <i>Physical Properties of Wood</i>	3
WDSC 341, <i>Wood Mechanics</i>	3
WDSC 362, <i>Forest Products Decision-Making</i>	4
WDSC 413, <i>Wood Chemistry</i>	3
WDSC 422, <i>Forest Products Harvesting</i>	3
WDSC 465, <i>Wood-Based Composite Materials</i>	3
WDSC 491, <i>Professional Field Experience</i>	3
WDSC 480, <i>Capstone Project 1 (capstone)</i>	2
WDSC 481, <i>Capstone Project 2 (capstone)</i>	2

* May also count for GEC Credit.

Renewable Materials Marketing Area of Emphasis

ACCT 201, <i>Accounting Principles</i>	3
BUSA 330, <i>Marketing</i>	3
ARE 204, <i>Agribusiness Management</i>	3
ARE 461, <i>Agribusiness Finance</i>	3
WDSC 470, <i>Marketing Forest Products</i>	3
Minor in Agribusiness Management (U047), Business Administration (U039), or Entrepreneurship (U064)	15
Restricted Elective	3

Total Hours 128-
152

Shaded rows highlight courses that will be added as requirements in the proposed curriculum.

David DeVallance - Re: Approval Request to Allow Wood Science and Technology Students to Enroll in ACCT 201

From: Joseph Seiaman
To: DeVallance, David; Pearson, Timothy
Date: 8/19/2010 10:23 AM
Subject: Re: Approval Request to Allow Wood Science and Technology Students to Enroll in ACCT 201
CC: Wang, Jingxin

Dave,

The only restriction on ACCT 201 is a classification restriction. Only students of sophomore rank and higher are permitted to register for ACCT 201.

As for you reference to BUSA 330, please note that Bob Cook retired at the end of this past summer term. He will no longer be teaching BUSA 330, Survey of Marketing. Cy Logar, Professor of Marketing, has picked up Bob's teaching load for the 2010-11 academic year.

There are a series of restrictions placed on BUSA 330. Pre-B&E and B&E majors Economics majors are not permitted to enroll in BUSA 330, but this restriction will not affect your students. The other restriction placed on the course that will affect your students is the classification restriction. Only students of junior rank and higher are permitted to register for the on campus section of BUSA 330 in the spring term. Note that we offer BUSA 330 on campus in the spring term and in both on campus and online in the summer term. There is normally a high demand for seats in the on campus section in the spring, so make sure your majors register on their respective preregistration priority dates.

If you have any further questions, don't hesitate to contact me.

Joseph P. Seiaman
Director of Undergraduate Programs & Advising
WVU College of Business and Economics
PO Box 6025
Morgantown, WV 26506
(304) 293-4959

>>>> David DeVallance 8/19/2010 9:49 AM >>>>

Thank you for your quick response. At this time, we are looking at some other business courses (in particular BUSA 330, for which we have contacted Dr. Cook). If we identify other courses, we will let you know to make sure our students can enroll.

Thanks again,

Dave

>>>> Timothy Pearson 8/19/2010 9:43 AM >>>>

David, I appreciate your request and think this is fine. We do not have any restrictions against Wood Science and Technology Students enrolling in A201 so I do not think we need to take any special action to permit them. I have cc ed Joseph Seiaman to comment on this if my assumption is correct.

David DeVallance - Re: Approval Request to Allow Wood Science and Technology Students to Enroll in ARE204

From: Tesfa Gebremedhin
To: DeVallance, David
Date: 8/19/2010 11:01 AM
Subject: Re: Approval Request to Allow Wood Science and Technology Students to Enroll in ARE204

Dear Dr. DeVallance,
I would be glad to allow your Wood Science and Technology students to enroll in my ARE 204. As you may be aware, it is available this Fall, 2010. Please let me know, if they need my signature to enroll for the class. I believe the classroom (Room 2001, AS Bldg) has enough seats to accommodate your 3 to 5 students. Thank you for the interest. Best regards.

Tesfa Gebremedhin, Ph.D.
Professor of Agricultural and Resource Economics
Division of Resource Management
P. O. Box 6108
West Virginia University
Morgantown, WV 26506-6108
304-293-5509
tgcbrem@wvu.edu

>>> David DeVallance 8/19/2010 9:32 AM >>>
Dear Dr. Gebremedhin,

Please see the attached letter regarding the possibility of allowing Wood Science and Technology students to enroll in ARE 204 when offered. If this letter should be directed to someone else, rather than yourself, please let me know.

Feel free to contact me if you have any questions or concerns over the request. Thank you for your consideration.

Sincerely,

David DeVallance

Dave DeVallance, PhD
Assistant Professor
Division of Forestry & Natural Resources

From: Gerard D'Souza
To: David DeVallance
CC: Jingxin Wang
Date: 8/19/2010 10:17 AM
Subject: Re: Approval Request to Allow Wood Science and Technology Students to Enroll in ARE461

Hi Dave,

Thanks for your letter. I would be delighted to have your students enroll in ARE 461 (Finance, offered every Spring semester). I have had students from your program in the past, and have been very impressed with their quality. At this time, there are no prerequisites other than senior standing. Thanks again, and best wishes.

Gerard.

~~~~~  
 Gerard E. D'Souza, Ph.D.  
 Professor  
 Agricultural & Resource Economics Program  
 West Virginia University  
 PO Box 6108  
 Morgantown, WV 26506-6108  
 Phone: 304-293-4832 ext. 4471  
<http://www.caf.wvu.edu/gdsouzawww/>

>>> David DeVallance 8/19/2010 9:35 AM >>>

Dear Dr. D'Souza,

Please see the attached letter regarding the possibility of allowing Wood Science and Technology students to enroll in ARE 461 when offered. If this letter should be directed to someone else, rather than yourself, please let me know.

Feel free to contact me if you have any questions or concerns over the request. Thank you for your consideration.

Sincerely,

David DeVallance

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Dave DeVallance, PhD  
 Assistant Professor  
 Division of Forestry & Natural Resources  
 West Virginia University  
 Morgantown, WV 26506  
 Office: 206-F Percival Hall  
 Phone: 304/293-0029

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**David DeVallance - Re: Approval Request to Allow Wood Science and Technology Students to Enroll in BUSA 330**

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**From:** Cyril Logar  
**To:** DeVallance, David  
**Date:** 8/23/2010 11:10 AM  
**Subject:** Re: Approval Request to Allow Wood Science and Technology Students to Enroll in BUSA 330

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Dr. DeVallance

I have no problem with your students taking the BUSA 330 class from me in the Spring. I talked with Joe Seiaman and he indicated that we are not able to reserve specific seats but we both suggest that you instruct your students to register for the course at the earliest possible time during the process. I also ask that you please send me, if you have or when it is available, as list of the students such that I can look for their names.

Dr. Logar

>>> David DeVallance 8/19/2010 5:00 PM >>>  
Dear Dr. Logar,

Please see the attached letter regarding the possibility of allowing Wood Science and Technology students to enroll in BUSA 330 when offered. Joseph Seiaman indicated you would be teaching this course now as Dr. Cook has retired. Joseph also indicated that the restrictions should not be an issue with our Wood Science Students (given they are junior rank and higher).

If this letter should be directed to someone else, rather than yourself, please let me know.

Feel free to contact me if you have any questions or concerns over the request. Thank you for your consideration.

Sincerely,

David DeVallance

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Dave DeVallance, PhD  
Assistant Professor  
Division of Forestry & Natural Resources  
West Virginia University  
Morgantown, WV 26506  
Office: 206-F Percival Hall  
Phone: 304/293-0029

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## Proposed New

### SUSTAINABLE LOW-RISE RESIDENTIAL CONSTRUCTION AREA OF EMPHASIS

The Sustainable Low-Rise Residential Construction Area of Emphasis<sup>†</sup> prepares students for careers in management and supervision of single family and multi-family, low-rise residential (i.e. town houses and 2-3 story apartment buildings) construction.

Justification: As is the case with Wood Science and Technology graduates embarking in marketing careers, a number of graduates have entered the light-frame residential construction industry. According to 2008 Bureau of Labor Statistics, residential construction industry employs approximately 8.98 million people in the United States annually, and is projected to increase through 2018. Of that 8.98 million, 2,533,600 are Carpenters and Laborers specifically. Residential housing construction consumes an estimated 24.2 billion board feet of softwood and engineered wood lumber, 1 billion board feet of hardwood lumber, and 21.2 billion square feet of wood-based structural panels (based on 2003 data). Additionally, wood comprises approximately 43% of the total cost of the building materials used in the residential construction industry and nearly 98% of the framing materials in the structure. Given wood is the primary building material in residential housing, the objective of the Sustainable Low-Rise Residential Construction Area of Emphasis is to provide students with the skills and knowledge necessary for future employment in residential construction related industries. To achieve this objective, we will educate students on various aspects related to: sustainable residential planning, construction and management techniques, building materials, and finished wood products.

The proposed area of emphasis is detailed on the following page. Supporting letters from departments that offer the courses included in this area of emphasis follow.

Approval of this Area of Emphasis by the Faculty Senate will not preclude other programs at West Virginia University from using the terms “sustainable” or “construction” to describe either courses or curricula.

The proposed academic requirements for the Sustainable Low-Rise Residential Construction Area of Emphasis follow. The new suggested sequence of courses includes courses required for the major and courses meeting the West Virginia University General Education Curriculum (GEC). Please note that there are no required GEC classes; however, some of the courses required for the Area of Emphasis may also fulfill GEC objectives. The actual program of study for each student will be established by the student in consultation with the academic advisor.

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<sup>†</sup> The name "Sustainable Low-Rise Residential Construction" was agreed upon in meetings between faculty and administrators of the Division of Forestry and Natural Resources and the Department of Civil and Environmental Engineering in order to distinguish this (Area of Emphasis/Minor) which focuses on new home construction from sustainable construction programs that Civil and Environmental Engineering that focus on high-rise and/or non-residential construction.

**AREA OF EMPHASIS – SUSTAINABLE LOW-RISE RESIDENTIAL CONSTRUCTION**

| <b>Current Requirements</b>                     | <b>Hrs</b> | <b>Proposed Requirements</b>         | <b>Hrs</b> |
|-------------------------------------------------|------------|--------------------------------------|------------|
| New Area of Emphasis<br>No Current Requirements |            | <u>General Education Curriculum</u>  |            |
|                                                 |            | GEC 1 - Communications               |            |
|                                                 |            | ENGL 101                             | 3          |
|                                                 |            | ENGL 102                             | 3          |
|                                                 |            | Intensive English Writing (W) Course | 3          |
|                                                 |            | GEC 2 – Basic Math and Science       | 13-14      |
|                                                 |            | GEC 3 – The Past and Its Traditions  | 3          |
|                                                 |            | GEC 4 – Contemporary Society         | 3-4        |
|                                                 |            | GEC 5 – Artistic Expression          | 3          |
|                                                 |            | GEC 6 – The Individual in Society    |            |
|                                                 |            | FOR 101 <i>or</i> equivalent         | 1          |
|                                                 |            | Other GEC 6                          | 3          |
|                                                 |            | GEC 7 – American Culture             | 3          |
|                                                 |            | GEC 8 – Western Culture              | 3          |
|                                                 |            | GEC 9 – Non-Western Culture          | 3          |

New Area of Emphasis  
No Current Requirements

Wood Science Core

|                                                    |   |
|----------------------------------------------------|---|
| MATH 150*                                          | 3 |
| BIOL 101* and BIOL 103*                            | 4 |
| CHEM 111* or CHEM 115*                             | 4 |
| PHYS 101*                                          | 4 |
| STAT 211*                                          | 3 |
| ECON 201*                                          | 3 |
| ECON 202*                                          | 3 |
| FOR 203, <i>Careers in Natural Resources 2</i>     | 1 |
| FOR 205, <i>Dendrology</i>                         | 3 |
| FOR 240, <i>Intro Computing -Ntrl Resource</i>     | 3 |
| FOR 438, <i>Human Dimensions Nat Rsrc Mang</i>     | 3 |
| FMAN 222, <i>Forest Mensuration</i>                | 4 |
| WDSC 100, <i>Forest Resources in U.S. History*</i> | 3 |
| WDSC 223, <i>Wood Anatomy and Structure</i>        | 3 |
| WDSC 232, <i>Wood Grading &amp; Procurement</i>    | 3 |
| WDSC 340, <i>Physical Properties of Wood</i>       | 3 |
| WDSC 341, <i>Wood Mechanics</i>                    | 3 |
| WDSC 362, <i>Forest Products Decision-Making</i>   | 4 |
| WDSC 413, <i>Wood Chemistry</i>                    | 3 |
| WDSC 422, <i>Forest Products Harvesting</i>        | 3 |
| WDSC 465, <i>Wood-Based Composite Materials</i>    | 3 |
| WDSC 491, <i>Professional Field Experience</i>     | 3 |
| WDSC 480, <i>Capstone Project 1 (capstone)</i>     | 2 |
| WDSC 481, <i>Capstone Project 2 (capstone)</i>     | 2 |

\* May also count for GEC Credit.

Sustainable Residential Constr. Area of Emphasis

|                                                                                                           |    |
|-----------------------------------------------------------------------------------------------------------|----|
| DSGN 293, <i>Construction Communication</i>                                                               | 3  |
| ID 240, <i>Codes and Interior Construction</i>                                                            | 3  |
| SAFM 470, <i>Managing Construction Safety</i>                                                             | 3  |
| WDSC 320, <i>Sustainable Construction</i>                                                                 | 3  |
| Minor in Agribusiness Management (U047),<br>Business Administration (U039), or<br>Entrepreneurship (U064) | 15 |
| Restricted Elective                                                                                       | 6  |

Total Hours 128-  
152

Shaded rows highlight courses that will be added as requirements in the proposed curriculum.



West Virginia University

Davis College of Agriculture, Natural Resources and Design

June 11, 2011

Mr. Gray,

I approve of the course ID 240: Building Codes being included in the proposed Minor in Sustainable Low-Rise Residential Construction that you are creating within the Davis College. The course will be offered with enough regularity to make it appropriated for inclusion, and I welcome any increased enrollment that may result from its inclusion in the Minor.

A handwritten signature in blue ink, reading 'Barbara McFall'.

Barbra McFall, Director  
Division of Design & Merchandising  
Barbara.mcfall@mail.wvu.edu

A handwritten signature in blue ink, reading 'Cindy Beacham'.

Cindy Beacham, Program Chair  
Interior Design  
Cindy.Beacham@mail.wvu.edu

Phone: 304-293-3402  
Fax: 304-293-2700

Division of Design & Merchandising

702 Allen Hall  
PO Box 6124  
Morgantown, WV 26509-9124

Equal Opportunity/Affirmative Action Institution



West Virginia University

College of Engineering and Mineral Resources

June 5, 2011

Jody Gray  
Wood Products Specialist  
Appalachian Hardwood Center  
West Virginia University  
Division of Forestry  
325A Percival Hall  
Morgantown, WV 26506

Dear Mr. Gray:

After discussing the matter, I approve of my course (Managing Construction Safety, SAFM 470) being included in the proposed Area of Emphasis in sustainable Low-Rise Residential Construction you are creating within the Davis College of Agriculture, Natural Resources, and Design. The course will be offered with enough regularity (normally, once per year in the Spring semester) to make it appropriate for inclusion and I welcome any increased enrollment that may result from its inclusion in the proposed Area of Emphasis. The course is a technical elective for other departments in engineering, and as such does not require other pre-requisites.

Thank you,  
  
Gary Winn, PhD., CHST  
Professor, Safety Management

304-293-4607 / 2742  
Fax 304-293-4970  
[www.cemr.wvu.edu/~winn/](http://www.cemr.wvu.edu/~winn/)

Department of Industrial and Management Systems Engineering

PO Box 6070  
Morgantown, WV 26506-6070

Equal Opportunity/Affirmative Action Institution



West Virginia University

Davis College of Agriculture, Natural Resources and Design

June 11, 2011

Mr. Gray,

I approve of the course DSGN 293: Construction Communication being included in the proposed Area of Emphasis in Sustainable Low-Rise Residential Construction that you are creating within the Davis College. The course will be offered with enough regularity to make it appropriated for inclusion, and I welcome any increased enrollment that may result from its inclusion in the Area of Emphasis.

A handwritten signature in blue ink, reading 'Barbara McFall'.

Barbra McFall, Director  
Division of Design & Merchandising  
Barbara.mcfall@mail.wvu.edu

A handwritten signature in blue ink, reading 'Cindy Beacham'.

Cindy Beacham, Program Chair  
Interior Design  
Cindy.Beacham@mail.wvu.edu

Phone: 304-293-3402  
Fax: 304-293-2750

Division of Design & Merchandising

702 Allen Hall  
PO Box 6124  
Morgantown, WV 26506-6124

Equal Opportunity/Affirmative Action Institution

## Curriculum Revision

### B.S. IN WOOD SCIENCE AND TECHNOLOGY

#### APPROVAL

|                |                                                                                                                                                                                                |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date:<br>_____ | Initiated By ( <b>Please type or print legible</b> ): <u>Jingxin Wang</u><br>Initiator's Signature: _____<br>Initiator's Phone Number: <u>293-7601</u> Email: <u>Jingxin.Wang@mail.wvu.edu</u> |
| Date:<br>_____ | Approved By ( <b>Please type or print legible</b> ): <u>Dr. J. Todd Petty</u><br>Approval Signature: _____<br><b>(Department Curriculum Committee)</b>                                         |
| Date:<br>_____ | Approved By ( <b>Please type or print legible</b> ): <u>Dr. Joseph F. McNeel</u><br>Approval Signature: _____<br><b>(Chairperson of Department/Division)</b>                                   |
| Date:<br>_____ | Approved By ( <b>Please type or print legible</b> ): <u>Dr. John W. Edwards</u><br>Approval Signature: _____<br><b>(College Curriculum Committee)</b>                                          |
| Date:<br>_____ | Approved By ( <b>Please type or print legible</b> ): <u>Dr. Dan Robison</u><br>Approval Signature: _____<br><b>(Dean or College or School)</b>                                                 |

|                            |                            |  |
|----------------------------|----------------------------|--|
| Approved by Faculty Senate | Date: _____                |  |
| Signature: _____           | Curriculum Committee Chair |  |

## PROPOSAL TO WVU FACULTY SENATE CURRICULUM COMMITTEE

The Department of Mathematics at WVU Tech proposes the following changes in our program with the supplied rationales:

1. Change CS 122 from 3 credit hours to 4 credit hours.

**Rationale:** This is due to the change proposed by computer science department.

2. Remove the 1 credit hour course Math 430 Math for Citizenship from the program requirement and drop the course from WVU Tech catalog starting Fall 2013.

**Rationale:** Math 430 Math for Citizenship is a low enrollment course and the citizenship requirement is no longer part of the general education requirements for our institution. Department of Mathematics has decided to remove this course from our program.

3. Change Math 496 Senior Thesis from 1 credit hour to 2 credit hours on our pattern sheets.

**Rationale:** Math 496 Senior Thesis is a 1-3 variable credit hour course. Department of Mathematics at WVU Tech would like to strengthen the senior thesis by changing it from 1 credit hour to 2 credit hours on our pattern sheets.

4. Remove three unrestrictive electives from the program requirement.

**Rationale:** Math program contains seven unrestrictive electives. By removing three of the electives, one will be able to reduce the total number of credit hours from 128 to 120.

Submitted by

Bing Yang, Ph.D.  
Professor and Chair  
Department of Mathematics  
[Bing.yang@mail.wvu.edu](mailto:Bing.yang@mail.wvu.edu)  
(304) 442-3019

## Current Pattern Sheet

**Mathematics**  
**Bachelor of Science - Business Track**

| First Semester   |     |                                    |    | Second Semester |     |                                   |    |
|------------------|-----|------------------------------------|----|-----------------|-----|-----------------------------------|----|
| ENGL             | 101 | English Comp. I ( <i>GEC 1</i> )   | 3  | ENGL            | 102 | English Comp. II ( <i>GEC 1</i> ) | 3  |
| WVUE             | 191 | First Year Seminar                 | 1  | MATH            | 156 | Calculus 2 ( <i>GEC 2</i> )       | 4  |
| MATH             | 155 | Calculus 1 ( <i>GEC 2</i> )        | 4  | CS              | 122 | Computer Science II               | 3  |
| CS               | 121 | Computer Science I                 | 4  | <i>GEC</i>      |     | <i>Lab Science (GEC 2)</i>        | 4  |
| <i>GEC</i>       |     | <i>Lab Science (GEC 2)</i>         | 4  |                 |     | Elective                          | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 16 |                 |     |                                   | 17 |
| Third Semester   |     |                                    |    | Fourth Semester |     |                                   |    |
| MATH             | 283 | Intro to Concepts of Math          | 3  | MATH            | 261 | Elem. Diff. Equations             | 4  |
| MATH             | 251 | Multivariable Calculus             | 4  | MATH            | 441 | Applied Linear Algebra            | 3  |
| ACCT             | 201 | Principles of Accounting I         | 3  | ACCT            | 202 | Principles of Accounting II       | 3  |
| ENGL             | 305 | Sci./Tech. Writing                 | 3  |                 |     | Elective                          | 3  |
| <i>GEC 3</i>     |     | <i>The Past and Its Traditions</i> | 3  | <i>GEC 4</i>    |     | <i>Contemporary Society</i>       | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 16 |                 |     |                                   | 16 |
| Fifth Semester   |     |                                    |    | Sixth Semester  |     |                                   |    |
| MATH             | 448 | Probability and Statistics         | 3  | BCOR            | 370 | Managing Ind. & Teams             | 3  |
| ECON             | 202 | Principles of Economics I          | 3  | MATH            | 341 | Intro to Alg. Structures          | 3  |
| <i>GEC 5</i>     |     | <i>Artistic Expression</i>         | 3  | <i>GEC 6</i>    |     | <i>The Individual in Society</i>  | 3  |
|                  |     | Elective                           | 3  | ECON            | 201 | Principles of Econ. II            | 3  |
|                  |     | Technical Elective                 | 3  |                 |     | Elective                          | 4  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 15 |                 |     |                                   | 16 |
| Seventh Semester |     |                                    |    | Eighth Semester |     |                                   |    |
| FINC             | 325 | Financial Management I             | 3  | FINC            | 326 | Financial Management II           | 3  |
| <i>GEC 7</i>     |     | <i>American Culture</i>            | 3  | MATH            | 496 | Senior Thesis                     | 1  |
| MATH             |     | Elective (300 or 400 level)        | 3  | MATH            |     | Elective (300 or 400 level)       | 3  |
| MATH             | 430 | Math for Citizenship               | 1  |                 |     | Technical Elective                | 3  |
| <i>GEC 8</i>     |     | <i>Western Culture</i>             | 3  | <i>GEC 9</i>    |     | <i>Non-Western Culture</i>        | 3  |
|                  |     | Technical Elective                 | 3  |                 |     | Elective                          | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 16 |                 |     |                                   | 16 |

Technical electives must be chosen from an approved list-see department chair.

## Current Pattern Sheet

### Mathematics Bachelor of Science - Classic Track

| First Semester   |     |                                    |    | Second Semester |     |                                   |    |
|------------------|-----|------------------------------------|----|-----------------|-----|-----------------------------------|----|
| ENGL             | 101 | English Comp. I ( <i>GEC 1</i> )   | 3  | ENGL            | 102 | English Comp. II ( <i>GEC 1</i> ) | 3  |
| WVUE             | 191 | First Year Seminar                 | 1  | MATH            | 156 | Calculus 2 ( <i>GEC 2</i> )       | 4  |
| MATH             | 155 | Calculus 1 ( <i>GEC 2</i> )        | 4  | CS              | 122 | Computer Science II               | 3  |
| CS               | 121 | Computer Science I                 | 4  | <i>GEC</i>      |     | <i>Lab Science (GEC 2)</i>        | 4  |
| <i>GEC</i>       |     | <i>Lab Science (GEC 2)</i>         | 4  |                 |     | Elective                          | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 16 |                 |     |                                   | 17 |
| Third Semester   |     |                                    |    | Fourth Semester |     |                                   |    |
| MATH             | 283 | Intro to Concepts of Math          | 3  | MATH            | 261 | Elem. Diff. Equations             | 4  |
| MATH             | 251 | Multivariable Calculus             | 4  |                 |     | Elective                          | 3  |
| PHYS             | 111 | Physics for Sci. & Eng. I          | 4  | <i>GEC 4</i>    |     | <i>Contemporary Society</i>       | 3  |
| <i>GEC 3</i>     |     | <i>The Past and Its Traditions</i> | 3  |                 |     | Technical Elective                | 3  |
|                  |     | Elective                           | 3  |                 |     | Elective                          | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 17 |                 |     |                                   | 16 |
| Fifth Semester   |     |                                    |    | Sixth Semester  |     |                                   |    |
| ENGL             | 305 | Sci./Tech. Writing                 | 3  | MATH            | 448 | Probability & Statistics          | 3  |
| MATH             | 441 | Applied Linear Algebra             | 3  | MATH            | 341 | Intro to Alg. Structures          | 3  |
| <i>GEC 5</i>     |     | <i>Artistic Expression</i>         | 3  | <i>GEC 6</i>    |     | <i>The Individual in Society</i>  | 3  |
|                  |     | Technical Electives                | 3  |                 |     | Technical Electives               | 3  |
|                  |     | Elective                           | 3  |                 |     | Elective                          | 3  |
|                  |     |                                    | —  |                 |     |                                   | —  |
|                  |     |                                    | 15 |                 |     |                                   | 15 |
| Seventh Semester |     |                                    |    | Eighth Semester |     |                                   |    |
| MATH             | 451 | Intro to Real Analysis I           | 3  | MATH            | 452 | Intro to Real Analysis 2          | 3  |
| <i>GEC 7</i>     |     | <i>American Culture</i>            | 3  | MATH            | 496 | Senior Thesis                     | 1  |
| MATH             |     | Elective (300 or 400 level)        | 3  | MATH            |     | Elective (300 or 400 level)       | 3  |
| <i>GEC 8</i>     |     | <i>Western Culture</i>             | 3  |                 |     | Technical Elective                | 3  |
|                  |     | Technical Elective                 | 3  | <i>GEC 9</i>    |     | <i>Non-Western Culture</i>        | 3  |

|      |     |                      |    |          |    |
|------|-----|----------------------|----|----------|----|
| MATH | 430 | Math for Citizenship | 1  | Elective | 3  |
|      |     |                      | —  |          | —  |
|      |     |                      | 16 |          | 16 |

Technical electives must be chosen from an approved list-see department chair.

## Proposed Pattern Sheet

**Mathematics**  
**Bachelor of Science - Business Track**

## First Semester

## Second Semester

|            |     |                                  |    |            |     |                                   |    |
|------------|-----|----------------------------------|----|------------|-----|-----------------------------------|----|
| ENGL       | 101 | English Comp. I ( <i>GEC 1</i> ) | 3  | ENGL       | 102 | English Comp. II ( <i>GEC 1</i> ) | 3  |
| WVUE       | 191 | First Year Seminar               | 1  | MATH       | 156 | Calculus 2 ( <i>GEC 2</i> )       | 4  |
| MATH       | 155 | Calculus 1 ( <i>GEC 2</i> )      | 4  | CS         | 122 | Computer Science II               | 4  |
| CS         | 121 | Computer Science I               | 4  | <i>GEC</i> |     | <i>Lab Science (GEC 2)</i>        | 4  |
| <i>GEC</i> |     | <i>Lab Science (GEC 2)</i>       | 4  |            |     |                                   |    |
|            |     |                                  | —  |            |     |                                   | —  |
|            |     |                                  | 16 |            |     |                                   | 15 |

### Third Semester

### Fourth Semester

|              |     |                                    |    |              |     |                             |    |
|--------------|-----|------------------------------------|----|--------------|-----|-----------------------------|----|
| MATH         | 283 | Intro to Concepts of Math          | 3  | MATH         | 261 | Elem. Diff. Equations       | 4  |
| MATH         | 251 | Multivariable Calculus             | 4  | MATH         | 441 | Applied Linear Algebra      | 3  |
| ACCT         | 201 | Principles of Accounting I         | 3  | ACCT         | 202 | Principles of Accounting II | 3  |
| ENGL         | 305 | Sci./Tech. Writing                 | 3  | <i>GEC 4</i> |     | <i>Contemporary Society</i> | 3  |
| <i>GEC 3</i> |     | <i>The Past and Its Traditions</i> | 3  |              |     |                             |    |
|              |     |                                    | —  |              |     |                             | —  |
|              |     |                                    | 16 |              |     |                             | 13 |

## Fifth Semester

## Sixth Semester

|              |     |                            |    |              |     |                                  |    |
|--------------|-----|----------------------------|----|--------------|-----|----------------------------------|----|
| MATH         | 448 | Probability and Statistics | 3  | BCOR         | 370 | Managing Ind. & Teams            | 3  |
| ECON         | 202 | Principles of Economics I  | 3  | MATH         | 341 | Intro to Alg. Structures         | 3  |
| <i>GEC 5</i> |     | <i>Artistic Expression</i> | 3  | <i>GEC 6</i> |     | <i>The Individual in Society</i> | 3  |
|              |     | Elective                   | 3  | ECON         | 201 | Principles of Econ. II           | 3  |
|              |     | Technical Elective         | 3  |              |     | Elective                         | 4  |
|              |     |                            | —  |              |     |                                  | —  |
|              |     |                            | 15 |              |     |                                  | 16 |

### Seventh Semester

## Eighth Semester

|              |     |                         |   |      |     |                         |   |
|--------------|-----|-------------------------|---|------|-----|-------------------------|---|
| FINC         | 325 | Financial Management I  | 3 | FINC | 326 | Financial Management II | 3 |
| <i>GEC 7</i> |     | <i>American Culture</i> | 3 | MATH | 496 | Senior Thesis           | 2 |

|              |                             |   |              |                             |   |
|--------------|-----------------------------|---|--------------|-----------------------------|---|
| MATH         | Elective (300 or 400 level) | 3 | MATH         | Elective (300 or 400 level) | 3 |
| <i>GEC 8</i> | <i>Western Culture</i>      | 3 |              | Technical Elective          | 3 |
|              | Technical Elective          | 3 | <i>GEC 9</i> | <i>Non-Western Culture</i>  | 3 |
| <hr/>        |                             |   | <hr/>        |                             |   |
| 15           |                             |   | 14           |                             |   |

Technical electives must be chosen from an approved list-see department chair.

## Proposed Pattern Sheet

### Mathematics Bachelor of Science - Classic Track

| First Semester   |     |                                    |       | Second Semester |     |                                   |       |
|------------------|-----|------------------------------------|-------|-----------------|-----|-----------------------------------|-------|
| ENGL             | 101 | English Comp. I ( <i>GEC 1</i> )   | 3     | ENGL            | 102 | English Comp. II ( <i>GEC 1</i> ) | 3     |
| WVUE             | 191 | First Year Seminar                 | 1     | MATH            | 156 | Calculus 2 ( <i>GEC 2</i> )       | 4     |
| MATH             | 155 | Calculus 1 ( <i>GEC 2</i> )        | 4     | CS              | 122 | Computer Science II               | 4     |
| CS               | 121 | Computer Science I                 | 4     | <i>GEC</i>      |     | <i>Lab Science (GEC 2)</i>        | 4     |
| <i>GEC</i>       |     | <i>Lab Science (GEC 2)</i>         | 4     | <hr/>           |     |                                   |       |
|                  |     |                                    | 16    |                 |     |                                   | 15    |
| Third Semester   |     |                                    |       | Fourth Semester |     |                                   |       |
| MATH             | 283 | Intro to Concepts of Math          | 3     | MATH            | 261 | Elem. Diff. Equations             | 4     |
| MATH             | 251 | Multivariable Calculus             | 4     |                 |     | Elective                          | 3     |
| PHYS             | 111 | Physics for Sci. & Eng. I          | 4     | <i>GEC 4</i>    |     | <i>Contemporary Society</i>       | 3     |
| <i>GEC 3</i>     |     | <i>The Past and Its Traditions</i> | 3     |                 |     | Technical Elective                | 3     |
|                  |     |                                    | <hr/> |                 |     | Elective                          | 3     |
|                  |     |                                    | 14    |                 |     |                                   | 16    |
| Fifth Semester   |     |                                    |       | Sixth Semester  |     |                                   |       |
| ENGL             | 305 | Sci./Tech. Writing                 | 3     | MATH            | 448 | Probability & Statistics          | 3     |
| MATH             | 441 | Applied Linear Algebra             | 3     | MATH            | 341 | Intro to Alg. Structures          | 3     |
| <i>GEC 5</i>     |     | <i>Artistic Expression</i>         | 3     | <i>GEC 6</i>    |     | <i>The Individual in Society</i>  | 3     |
|                  |     | Technical Electives                | 3     |                 |     | Technical Electives               | 3     |
|                  |     | Elective                           | 3     |                 |     | Elective                          | 3     |
|                  |     |                                    | <hr/> |                 |     |                                   | <hr/> |
|                  |     |                                    | 15    |                 |     |                                   | 15    |
| Seventh Semester |     |                                    |       | Eighth Semester |     |                                   |       |

|              |     |                             |       |              |     |                             |       |
|--------------|-----|-----------------------------|-------|--------------|-----|-----------------------------|-------|
| MATH         | 451 | Intro to Real Analysis I    | 3     | MATH         | 452 | Intro to Real Analysis 2    | 3     |
| <i>GEC 7</i> |     | <i>American Culture</i>     | 3     | MATH         | 496 | Senior Thesis               | 2     |
| MATH         |     | Elective (300 or 400 level) | 3     | MATH         |     | Elective (300 or 400 level) | 3     |
| <i>GEC 8</i> |     | <i>Western Culture</i>      | 3     |              |     | Technical Elective          | 3     |
|              |     | Technical Elective          | 3     | <i>GEC 9</i> |     | <i>Non-Western Culture</i>  | 3     |
|              |     |                             | <hr/> |              |     |                             | <hr/> |
|              |     |                             | 15    |              |     |                             | 14    |

Technical electives must be chosen from an approved list-see department chair.

## **Proposed Curriculum Revision**

B.S. in Environmental and Natural Resource Economics

Division of Resource Management

Davis College of Agriculture, Natural Resources, and Design

Submitted by:

The Agricultural and Resource Economics Program

Contact Person: Alan Collins, Professor  
Alan.collins@mail.wvu.edu

Signatures:

Approved by (print or type): Alan Collins

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(Curriculum Committee Chair, Division of Resource Management)

Approved by (print or type): Jerry Fletcher

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(Director, Division of Resource Management)

Approved by (print or type): John Edwards

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(Curriculum Committee Chair, Davis College of Agriculture, Natural Resources, and Design)

Approved by (print or type): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(Dean, Davis College of Agriculture, Natural Resources, and Design)

## **Justification:**

In 1997, the Agricultural and Resource Economics (ARE) faculty established two majors: (1) Agribusiness Management and Rural Development, and (2) Environmental and Natural Resource Economics (ENRE). At that time, there were less than 30 students in the existing majors of the program. Since that time, student numbers have increased to about 130 students who are presently majoring in these degrees (most students are in the Agribusiness Management and Rural Development major). After adding four new faculty members in 2009 and 2010, the ARE faculty are now proposing to revise both majors along with creating a new major in Energy and Environmental Management. This proposal describes the changes being proposed for the Environmental and Natural Resource Economics major.

The proposed changes in existing majors and the creation of a new major will meet the changing needs of students and workplace demands plus complement existing faculty expertise in program. While the new major in Energy and Environmental Management will hopefully attract new majors, it is envisioned that many of the students currently in the Environmental and Natural Resource Economics major will transfer to this new major. A number of ENRE freshman and sophomore students have expressed a strong interest in this new major. In anticipation of these transfers and avoid duplication of curriculum offerings, the goal of this curriculum revision for the Environmental and Natural Resource Economics major is to offer a degree that will specifically prepare students for graduate school in one of the many fields of applied economics (Agricultural, Environmental or Natural Resource).

The current ENRE curriculum is flexible enough that some students (with proper advising) are able to meet the requirements of this proposed new curriculum and are prepared for graduate school upon graduation. The proposed new curriculum will standardize student outcomes across all graduates in Environmental and Natural Resource Economics in that they are prepared for graduate school. Curriculum changes are described below and justified in categories of substantial and minimal.

### **Substantial Changes:**

- (A) Enhance the economic theory and quantitative requirements with the inclusion of requirements in Intermediate Macroeconomics (ECON 302) and Mathematical Economics (ECON 421) and Introductory Econometrics (ECON 425). See attachment I for sign-off from the Economics Department.

*Justification:* These courses will prepare students – both theoretically and quantitatively for graduate school. ECON 421 and 425 or equivalent math economics and introductory

econometrics are pre-requisites for the M.S. in Agricultural and Resource Economics at West Virginia University. ECON 302 is recommended.

- (B) Energy economics courses are required for this major – ARE 445 (Energy Economics) as a curriculum requirement and ARE 187 as a pre-requisite for ARE 445. Students will be advised to take ARE 187 to meet a General Education Curriculum (GEC) requirement.

*Justification:* Given the significance of energy resources in this state and region, these courses will provide students with an adequate basis for understanding economic principles and theories applied to energy markets.

- (C) Reduce the number of credit hours required for graduation from 128 to 120.

*Justification:* We believe this will aid in retention and improve graduation rates by enabling students to more easily graduate in four years while still providing them with the knowledge and skills they need.

### Minimal Changes:

- Introductory economic theory courses (ECON 201 and ECON 202) are dropped from curriculum requirements. Students will be advised to continue to take these courses in preparation for ECON 301 and ECON 302.
- Changing the GEC science requirements to a choice between four sciences (Biology, Chemistry, Geography, and Geology) and students must choose at least two. This change is being made to avoid students simply taking only the Biology series (101, 102, 103, and 104) to fulfill their science requirement.
- Three new courses were added to the required courses. This is considered a minimal change because these are environmental management courses that most ENRE students currently take as restricted electives – RESM 480 (Environmental Regulation) and RESM 440 & 442 (Foundations of Geographical Information Systems (GIS) and the follow-up Social Sciences Applications). RESM 480 gives students an overview perspective of the legal and regulatory aspects of environmental protection – an important societal mechanism for addressing environmental issues. RESM 440 & 442 provide important skill sets for students in data management and analysis where data can be identified as located at a certain point on land or in the water, a characteristic of most environmental problems.
- In the required courses, specify the type of course (calculus, microcomputer software applications, and statistics) with a recommended course or its equivalent. This change is being made is to provide flexibility for students in meeting these required courses from other disciplines.

- The capstone course (ARE 496) has been moved from restricted electives where it currently resides in the curriculum to a listed course in the “Curriculum Requirements”. Only a senior thesis is now allowed for a capstone experience. Since this major is to prepare students for graduate school, a senior thesis, with its original research, writing and presentation requirements along with working in consultation with a faculty member, will provide undergraduates in this major with insights into what is required as part of a thesis option graduate degree.
- Expand the restricted electives from four courses in the Davis College of Agriculture, Natural Resources, and Design with “at least one course in agronomy and one in plant science” to “either an approved minor or at least four courses at the 300 or 400 level – either from Agriculture and Resource Economics, Agronomy, Environmental Protection, Forestry, or Economics”. This allows students more options to pursue course work in specific areas of interest in the broad fields of the environment and natural resources.

## **Current On-line Catalog Description:**

### **Bachelor of Science - Environmental and Natural Resource Economics Major**

The objective of this major is to provide students with the necessary training for the application of economic theory and analysis to environmental and natural resource policy. The flexibility of this major allows students to design (with their advisor) a program of study which focuses on environmental and natural resource issues tailored to the student's own interests (such as water use and quality, soil protection, waste management, ecosystem management, and land use). The curriculum reflects the breadth of training required to prepare students for careers in private and government sectors dealing with environmental and natural resource management and policy analysis.

Students with this major can expect to find employment with state and federal government agencies or with private industry in environmental policy analysis and management of natural resources. Many students, upon completion of this degree, may find it desirable to obtain a graduate degree to expand their career opportunities in environmental or natural resource economics. Students completing this degree will be prepared for graduate study in environmental and natural resource economics and policy.

## **Environmental and Natural Resource Economics**

### **Curriculum Requirements**

|                                                                                          |       |
|------------------------------------------------------------------------------------------|-------|
| Select one of the following:                                                             | 3-6   |
| ENGL 101      Composition And Rhetoric                                                   |       |
| & ENGL 102    and Composition And Rhetoric                                               |       |
| ENGL 103      Accelerated Academic Writing                                               |       |
| GEC Objective 2A, 2B, and 2C (Must include two 4 credit courses- each with a laboratory) | 14-15 |
| Select one from each GEC Objective 3, 4, 5, 6, 7, 8, and 9                               | 22    |
| WVUE 191      First Year Seminar                                                         | 1     |
| ARE 220        Intro Environmental/Resource Econ                                         | 3     |
| ARE 382        Agri and Natural Resources Law                                            | 3     |
| ARE 401        Applied Demand Analysis                                                   | 3     |
| ARE 410        Environmental/Resource Economics                                          | 3     |
| ARE 450        Agr/Envrmntl & Resource Policy                                            | 3     |
| ARE 494        Sem: Agr/Res Economics Issues                                             | 1     |
| AGEE 110       Microcomputr Applcatns-Ag Ed                                              | 3     |

|                                                                                                                                                                                                                                                  |                                                                             |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------|
| ECON 201                                                                                                                                                                                                                                         | Principles of Microeconomics                                                | 3       |
| ECON 202                                                                                                                                                                                                                                         | Principles of Macroeconomics                                                | 3       |
| Select one of the following:                                                                                                                                                                                                                     |                                                                             | 3       |
| ECON 225                                                                                                                                                                                                                                         | Elemntry Busness/Economcs Stat                                              |         |
| STAT 211                                                                                                                                                                                                                                         | Elemntry Statistical Inference                                              |         |
| MATH 150                                                                                                                                                                                                                                         | Applied Calculus                                                            | 3       |
| Restricted Electives                                                                                                                                                                                                                             |                                                                             | 30      |
| These electives are selected and approved in consultation with your advisor. They must include at least four courses from Davis College (at least one course in agronomy and one in plant science) and the Capstone experience (ARE 491 or 496). |                                                                             |         |
| ARE 491                                                                                                                                                                                                                                          | Prof Field Experience: Capstone (These electives are selected and approved) |         |
| ARE 496                                                                                                                                                                                                                                          | Senior Thesis: Capstone                                                     |         |
| Free Electives                                                                                                                                                                                                                                   |                                                                             | 27      |
| Total Hours                                                                                                                                                                                                                                      |                                                                             | 128-132 |

## Suggested Plan of Study for Environmental and Natural Resource Economics Major

| First Year                            |       |                              |       |
|---------------------------------------|-------|------------------------------|-------|
| Fall                                  | Hours | Spring                       | Hours |
| Select one of the following: (GEC 2a) | 3     | Select one of the following: | 3     |
| MATH 126A                             |       | STAT 211                     |       |
| MATH 126B                             |       | ECON 225                     |       |
| MATH 126C                             |       | ENVP 155                     | 3     |
| ENGL 101                              | 3     | AGEE 110                     | 3     |
| BIOL 101 & 103 (GEC 2b)               | 4     | GEC Objective 3, 5, or 7     | 3     |
| ARE 150 (GEC 6)                       | 3     | AGEE 101 (GEC 9)             | 3     |
| ARE 187 (GEC 2c)                      | 3     |                              |       |
| WVUE 191                              | 1     |                              |       |
|                                       | 17    |                              | 15    |

### Second Year

| <b>Fall</b>      | <b>Hours</b> | <b>Spring</b>             | <b>Hours</b> |
|------------------|--------------|---------------------------|--------------|
| MATH 150         | 3            | <b>Spring</b>             | Hours        |
| ENGL 102         | 3            | ECON 202 (GEC 8)          | 3            |
| ECON 201         | 3            | ARE 220                   | 3            |
| CHEM 111(GEC 2b) | 4            | AGRN 202                  | 3            |
| Free Electives   | 3            | AGRN 203                  | 1            |
|                  | 16           | GEC Objectives 3, 5, or 7 | 6            |
|                  |              |                           | 16           |

**Third Year**

| <b>Fall</b>              | <b>Hours</b> | <b>Spring</b>        | <b>Hours</b> |
|--------------------------|--------------|----------------------|--------------|
| ARE 401                  | 3            | ARE 410              | 3            |
| ARE 494 Seminar course   | 1            | RESM 480             | 3            |
| ARE 382                  | 3            | ECON 302             | 3            |
| PLSC 206                 | 4            | ARE 406              | 3            |
| GEC Objective 3, 5, or 7 | 3            | Restricted Electives | 3            |
| Free Electives           | 3            |                      |              |
|                          | 17           |                      | 15           |

**Fourth Year**

| <b>Fall</b>                  | <b>Hours</b> | <b>Spring</b>  | <b>Hours</b> |
|------------------------------|--------------|----------------|--------------|
| RESM 440                     | 2            | ARE 450        | 3            |
| RESM 442                     | 1            | ECON 425       | 3            |
| Select one of the following: | 3            | Free Electives | 10           |
| ARE 491                      |              |                |              |
| ARE 496                      |              |                |              |
| ECON 421                     | 3            |                |              |
| Free Electives               | 7            |                |              |
|                              | 16           |                | 16           |

Total credit hours: 128

## **Revised On-Line Catalog Description:**

### **Bachelor of Science - Environmental and Natural Resource Economics Major**

The objective of this major is to provide students with the necessary training for the application of economic theory and analysis to environmental and natural resource policies. The flexibility of this major allows students to design (with their advisor) a program of study which focuses on environmental and natural resource issues tailored to the student's own interests (such as water use and quality, environmental protection, sustainability, land use, law, etc.). The curriculum reflects the breadth of training required to prepare students for careers in private and government sectors dealing with environmental and natural resource management and policy analysis.

Students with this major can expect to find employment with state and federal government agencies or with private industry in environmental policy analysis and management of natural resources. Many students, upon completion of this degree, may find it desirable to obtain a graduate degree to expand their career opportunities in environmental or natural resource economics. Students completing this degree will be prepared for graduate study in environmental and natural resource economics.

### **Curriculum Requirements**

|                                                                                                                                          |                                     |     |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----|
| Select one of the following:                                                                                                             |                                     | 3-6 |
| ENGL 101                                                                                                                                 | Composition And Rhetoric            |     |
| & ENGL 102                                                                                                                               | and Composition And Rhetoric        |     |
| ENGL 103                                                                                                                                 | Accelerated Academic Writing        |     |
| GEC Objective 2A and 2B Math and Sciences (must include two lab courses of different sciences (biology, chemistry, geography or geology) |                                     | 11  |
| GEC Objective 2C                                                                                                                         |                                     | 3   |
| Select one from each GEC                                                                                                                 |                                     |     |
| Objective 3, 4, 5, 6, 7, 8, and 9                                                                                                        |                                     | 22  |
| WVUE 191                                                                                                                                 | First Year Seminar                  | 1   |
| ARE 220                                                                                                                                  | Intro Environmental/Resource Econ   | 3   |
| ARE 382                                                                                                                                  | Agr and Natural Resources Law       | 3   |
| ARE 410                                                                                                                                  | Environmental/Resource Economics    | 3   |
| ARE 445                                                                                                                                  | Energy Economics                    | 3   |
| ARE 450                                                                                                                                  | Agr/Environmental & Resource Policy | 3   |
| ARE 494                                                                                                                                  | Seminar: Agr/Res Economics Issues   | 1   |
| ARE 496                                                                                                                                  | Senior Thesis                       | 3   |

|                                                                                                                                                                                                                                                                 |                              |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----|
| ECON 301                                                                                                                                                                                                                                                        | Intermediate Microeconomics  | 3   |
| ECON 302                                                                                                                                                                                                                                                        | Intermediate Macroeconomics  | 3   |
| ECON 421                                                                                                                                                                                                                                                        | Mathematical Economics       | 3   |
| ECON 425                                                                                                                                                                                                                                                        | Introductory Econometrics    | 3   |
| RESM 440                                                                                                                                                                                                                                                        | Foundations of GIS           | 2   |
| RESM 442                                                                                                                                                                                                                                                        | Social Sciences Applications | 1   |
| RESM 480                                                                                                                                                                                                                                                        | Environmental Regulation     | 3   |
| Calculus Course                                                                                                                                                                                                                                                 | MATH 150 or equivalent       | 3   |
| Microcomputer Course                                                                                                                                                                                                                                            | AGEE 110 or equivalent       | 3   |
| Statistics Course                                                                                                                                                                                                                                               | ECON 225 or equivalent       | 3   |
| Restricted Electives                                                                                                                                                                                                                                            |                              | 22  |
| Selected and approved in consultation with advisor, student must select either an approved minor or at least four courses at the 300 or 400 level – either from Agriculture and Resource Economics, Agronomy, Environmental Protection, Forestry, or Economics. |                              |     |
| Free Electives                                                                                                                                                                                                                                                  |                              | 10  |
| Total Hours                                                                                                                                                                                                                                                     |                              | 120 |

## Suggested Plan of Study for Environmental and Natural Resource Economics Major

| First Year                            |       |                                |       |
|---------------------------------------|-------|--------------------------------|-------|
| Fall                                  | Hours | Spring                         | Hours |
| Select one of the following: (GEC 2a) | 3     | Select one of the following: 3 |       |
| MATH 126A                             |       | STAT 211                       |       |
| MATH 126B                             |       | ECON 225                       |       |
| MATH 126C                             |       | ENVP 155                       | 3     |
| ENGL 101                              | 3     | AGEE 110                       | 3     |
| BIOL 101 & 103 (GEC 2b)               | 4     | GEC Objective 3, 5, or 7       | 3     |
| WVUE 191                              | 1     | AGEE 101 (GEC 9)               | 3     |
| ARE 150 (GEC 6)                       | 3     |                                |       |
|                                       | 14    |                                | 15    |

| <b>Second Year</b>      |              |                           |              |
|-------------------------|--------------|---------------------------|--------------|
| <b>Fall</b>             | <b>Hours</b> | <b>Spring</b>             | <b>Hours</b> |
| MATH 150                | 3            | ECON 202 (GEC 8)          | 3            |
| ENGL 102                | 3            | GEC Objectives 3, 5, or 7 | 6            |
| ARE 220                 | 3            | AGRN 202 & 203            | 4            |
| GEOL 110 & 111 (GEC 2b) | 4            | Free elective             | 3            |
| ARE 187 (GEC 2c)        | 3            |                           |              |
|                         | 16           |                           | 16           |

| <b>Third Year</b>        |              |                     |              |
|--------------------------|--------------|---------------------|--------------|
| <b>Fall</b>              | <b>Hours</b> | <b>Spring</b>       | <b>Hours</b> |
| ECON 301                 | 3            | ARE 410             | 3            |
| ARE 494 Seminar course   | 1            | RESM 480            | 3            |
| ARE 382                  | 3            | ECON 302            | 3            |
| GEC Objective 3, 5, or 7 | 3            | ARE 445             | 3            |
| Restricted Electives     | 6            | Restricted Elective | 3            |
|                          | 16           |                     | 15           |

| <b>Fourth Year</b>   |              |                |              |
|----------------------|--------------|----------------|--------------|
| <b>Fall</b>          | <b>Hours</b> | <b>Spring</b>  | <b>Hours</b> |
| RESM 440             | 2            | ARE 450        | 3            |
| RESM 442             | 1            | ECON 425       | 3            |
| ECON 421             | 3            | ARE 496        | 3            |
| ENVP 355             | 3            | Free Electives | 4            |
| Restricted Electives | 6            |                |              |
|                      | 15           |                | 13           |

Total credit hours: 120

## ATTACHMENT I – EMAIL CORRESPONDENCE FOR SIGN-OFF OF ECONOMICS COURSES AS ADDED REQUIRED COURSES

Alan,

I am in receipt of your Sept 14, 2012 letter regarding your new degree program (acronym EQuad) and your September 19, 2012 letter regarding the new degree program with acronym ENRE. Both letters outline the increases that you expect in enrollments in various Economics classes.

I write to say that in both cases the increases in enrollment that you outlined can be accommodated by Economics.

Sincerely,  
Cliff Hawley

Dr. Clifford B. Hawley  
Professor and Chair,  
Department of Economics  
West Virginia University  
Morgantown, WV 26506-6025  
tele: 304-293-7865  
fax: 304-293-5652 (call first)  
email: CBHawley@mail.wvu.edu

## Capstone Experience Form

A. Please provide a statement that illustrates how a student in the Capstone course would demonstrate each of the following abilities:

1. Gather material independently, as needed:

- Students will be required to utilize WVU libraries to research information for their capstone research project. Students will be required to present their findings in a research paper and as an oral report. Students will be required to have a minimum of 11 references. The student will be expected to find, read, and critically evaluate a minimum of 10 research articles and 1 review article from peer-reviewed journals on the topic and present an integrated oral report to the class.

2. Think critically about and to integrate the theoretical and/or practical knowledge that they have acquired throughout their undergraduate careers:

- Students will be required to have their capstone topic approved by an HNF faculty member. They will be required to research, review, and integrate peer-reviewed research articles to develop their research paper. Students will present their paper and will receive questions during this time from the class and instructors.

3. Reflect on the ethical (or societal) issues that are implicit in their project and/or their project's design:

- Students will reflect on the ethics and social implications related to nutrition through the development of their capstone research paper and capstone oral presentation.

B. Capstone Components

1. Please describe briefly how the written component of the Capstone Experience in the course(s) listed above is completed.

- Students are required to hand in a 10-page minimum research paper. Outlines and rough drafts will be collected prior to submission of the final paper and will be reviewed by the assigned faculty mentor.

2. Please describe briefly how the oral component of the Capstone Experience in the course(s) listed above is completed.

- Students are required to present their research paper in the form of an oral report. It will be a minimum of 20 minutes long with an additional 5-10 minute requirement for questions/answers.

## Memorandum

TO: Senate Executive Committee

From: Karen Russo Donovan  
Associate Dean for Academic Affairs  
College of Business and Economics

RE: Hospitality and Tourism Management Degree

Date: October 28, 2013

A major in Hospitality and Tourism Management was approved by the Faculty Senate June 10, 2013 (<http://facultysenate.wvu.edu/r/download/162535>). However, the major needs to be attached to a degree program. Currently, none of the degree programs in B&E align with a major in hospitality and tourism management. Therefore, we propose to create a new ***degree in hospitality and tourism management*** under which to assign the major in hospitality and tourism management. The degree designation would be a BSBA.

The Curriculum Change Action Form was submitted to Associate Provost, Elizabeth Dooley with the following information:

CIP Code 52.0901

Title: Hospitality Administration/Management, General.

## Hospitality & Tourism Management Degree Proposal

College of Business and Economics

September 10, 2013

### Summary Information

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| Name of Institution:               | West Virginia University                               |
| Category of Action Required:       | Approval by Faculty Senate and Presentation to the BOG |
| Title of Degree:                   | BSBAd in Hospitality and Tourism Management            |
| Location:                          | WVU College of Business and Economics                  |
| Effective date of Proposed Action: | Fall 2014                                              |

### Brief Summary Statement

The College of Business and Economics (CBE) requests permission to create a new undergraduate degree program in Hospitality and Tourism Management (HTOR). **A major in Hospitality and Tourism Management was approved by the Faculty Senate June 10, 2013**

(<http://facultysenate.wvu.edu/r/download/162535>) . However, the major needs to be attached to a degree program. Currently, none of the degree programs in B&E align with a major in hospitality and tourism management. Therefore, we propose to create a new ***degree in hospitality and tourism management*** under which to assign the major in hospitality and tourism management. The degree designation would be a BSBAd.

The degree program will prepare graduates for management positions in the second leading economic driver in the state. The degree program will also provide an option for those students who do not meet the criteria necessary to enter one of the already established degree programs currently offered by the CBE, thus better serving the students with an interest in Hospitality and Tourism, while also improving retention rates in the CBE and WVU. CBE met with the Davis College on 11/1/12 to discuss the proposal of transitioning the Hospitality and Tourism Area of Emphasis to a major and degree program. As you will note in Attachment 1, the Davis College is aware and supportive of this proposal. An Intent to Plan for the major was submitted to and approved by the Office of Academic Affairs as per an email from Associate Provost Dooley dated November 8, 2012. Additional phone and email conversations with Associate Provost Dooley regarding the creation of a degree program in Hospitality and Tourism Management occurred the week of August 12, 2013. Associate Provost's Dooley's August 28, 2013 response to the degree program intent to plan is presented in Attachment 2. All of Dr. Dooley's questions are addressed in this proposal. Additionally, the Dr. Dooley's approval of the Intent to Plan is presented in Attachment 3.

### **Alignment with WVU Mission**

West Virginia University's (WVU) primary mission is to provide high-quality programs of instruction at the undergraduate, graduate, and professional levels (<http://wvuhistory.wvu.edu/mission>). This new degree program will allow the CBE to provide a new, high quality program of instruction at the undergraduate level to students who currently do not have the option to pursue a degree in Hospitality and Tourism Management.

### **Rationale/Need for a Degree in Hospitality and Tourism Management**

There are two major reasons for this request for a new degree program. First, the CBE currently offers majors in Accounting, Economics, Finance, Management, Management Information Systems, Marketing and General Business. However, this is limiting for those students who wish to pursue a career in the Hospitality and Tourism industry. The new degree program will allow students to gain a comprehensive body of knowledge and the in depth skill sets to become successful leaders in the industry.

Secondly, in 2008, state tourism officials requested that the CBE design a Hospitality and Tourism program. Betty Carver, Commissioner of Tourism for the State of West Virginia, served on the College's Hospitality and Tourism Board of Advisors for the last four years and has been actively involved in the planning of the degree program. Please see the attached letter of support by the West Virginia Division of Tourism regarding the development of the degree program (Attachment 4). In the Spring of 2009 the College offered its first course in Hospitality and Tourism Leadership, an elective within the Management major and enrollment reached maximum capacity of twenty five within the first week of registration. Subsequently, an Area of Emphasis (AoE) consisting of four courses in various Hospitality and Tourism subject areas was developed and officially offered within the Management major. The proposed new degree program will truly answer the call by the State to assist in the development of Hospitality and Tourism leaders, while providing a viable academic opportunity for students in the CBE.

In the U.S., Hospitality and Tourism is one of the largest industries with \$2.0 trillion in economic output (U.S. Travel Association, 2012). It supports 14.6 million jobs, including 7.7 million directly in the travel industry and 6.9 million in the hospitality industry, such as hotels and restaurants. According to U.S. Travel Association (2012), travel and tourism is among the top 10 industries in 48 states and D.C. in terms of employment. Furthermore, 1 of every 8 U.S. non-farm jobs is created directly or indirectly by travel and tourism.

According to the study conducted by Dean Runyan Associates for the West Virginia Division of Tourism in September 2011, travel and tourism contributed \$4.27 billion to the West Virginia Economy in 2010. Also, AECOM's report submitted to the West Virginia Division of Tourism in June 2012 found that travel spending in the state has increased 5.6 percent per year since 2000. During 2010, it is reported that visitor spending in the state resulted in revenue of \$988 million. Moreover, travelers that stayed in commercial lodging facilities spent \$1.3 billion in 2010 and \$2.0 billion on gaming and entertainment - or about three-fourth of all travel spending in the state. According to data gathered in 2012 for the 2013 Economic Outlook Report, the hospitality and tourism industry is responsible for 74,000 jobs in West Virginia and that is expected to see annual growth of 1.8 percent in 2013.

The faculty of the Hospitality and Tourism AoE are involved in numerous state-wide initiatives in the hospitality and tourism industry. For example, several participate in the High School Pro-Start Program

run by the National Restaurant Association. The faculty are also actively involved in WVHEAT (Hospitality Education and Training) which is run by the West Virginia Department of Education. Finally, Frank DeMarco is the Co-Chair of a task-force for the WVHTA (Hospitality and Tourism Association) which is collaborating with WV HEAT and WVU Extension in creating an Online Guest Service Training for all Hospitality employees in the state. All of these programs and organizations present excellent opportunities to recruit high school and non-traditional students to both the University and the degree program.

### **Anticipated Enrollment**

In Fall 2012, 22 students had declared the Hospitality and Tourism AoE. This has grown from 17 students in the Fall of 2011, representing a 22.8% increase. As of Spring 2013, 32 students were enrolled in the AoE, representing an 88.2% increase since Fall of 2011. With most newly created programs, initial numbers are small but show growth over time. Thus, this growth is anticipated to continue as the degree is marketed to freshmen and sophomores.

During the fall semester, a survey of all students in the AoE was completed. There was a 72.7% response rate with 94% indicating that they would pursue a degree in Hospitality and Tourism if available. The majority of the respondents (69%) have one or more years of work experience in the hospitality and tourism industry. Interestingly, 81% of the respondents indicated interest in pursuing a Master of Business Administration degree (MBA). Thus, this program could be a feeder for the full-time MBA or Executive MBA program.

### **Resource Implications**

Mr. Frank DeMarco is the Coordinator of the Hospitality and Tourism AoE and Instructor of Management. Additionally, in the Fall of 2011 the CBE hired a tenure-track research faculty member, Dr. Ajay Aluri. By Fall 2015, once the program is in full delivery mode, another assistant or associate faculty member would be needed to fully cover all the courses.

Moreover, two pledges of \$50,000 annually for the next ten years were recently made to establish the Hospitality and Tourism Management degree. In Spring 2012, three of the Hospitality and Tourism Advisory Board members donated a total of \$15,000 for development of on-line courses.

The funds to hire the new faculty member are provided by a million dollars in gifts to B&E (two gifts of \$500,000). These two gifts specify a minimum of \$100,000/year for the next ten years. The way the gifts are structured is that the donors each guaranteed a minimum of \$50,000/year. However, the actual amount may be higher depending on the proceeds of the Taziki's restaurant in the Mountain Lair. B&E's development Office, is working with additional donors interested in funding the program as well. Moreover, B&E's Development Office is researching and focusing on foundations that support Hospitality and Tourism programs.

Dean Sartarelli is in full support of this program as hospitality and tourism represents such an important industry to the State. In Dean Sartarelli's strategic plan, the Hospitality and Tourism program is a funding priority. As such, Dean Sartarelli has indicated that in the unlikely event that there should there be a shortfall in the funds provided by the donors, additional monies will be made available from the College resources.

## Admissions Criteria

Students seeking admission to the degree of Bachelor of Science in Business Administration (BSBA)-Hospitality and Tourism Management must make formal application to the program. Specific details for admission and requirements are presented in Attachment 5.

## Curriculum

The Hospitality and Tourism Management degree will consist of the following:

- Students must complete the Business Core (BCOR) curriculum, which consists of a common body of knowledge representing subjects in Accounting, Economics, Business Statistics, Business Communications, Business Ethics, Business Law, Finance, Management, Management Information Systems, Marketing, Operations Management, and Contemporary Business Strategy.
- Students must complete a minimum of 24 semester hours of Hospitality and Tourism Core classes, which include a major core curriculum, major electives, and mandatory professional field experience. Similar to existing majors, the student's selection of courses would have to be approved by an Academic Advisor in the CBE.

## Assessment Plan

The Hospitality and Tourism Management degree program will go through a rigorous assessment by the CBE's Assurance of Learning (AoL) Committee made up of faculty from each respective department in the CBE. This will ensure through an objective review that program and course-specific learning outcomes are measured in compliance with standards set by AACSB International (the CBE's accrediting agency). This program will be subjected to the same rigorous AoL methodologies as all of the other majors in the BS in Business Administration degree. AoL is conducted on an ongoing basis through various methodologies, including evaluations of samples from writing assignments, verbal communications, embedded questions, and a senior assessment.

Student achievement of the learning outcomes specified below will be assessed through questions embedded in course exams. The goal is for a 70 percent pass rate (consistent with AoL goals for the BSBA program).

Additionally, the Hospitality and Tourism Board of Advisors has been instrumental in guiding the development of the plan of study and will continue to be involved to ensure that the courses are current and relevant.

## Learning Outcomes

The learning goals and objectives for the Hospitality and Tourism Management degree are as follows:

1. **Lodging and Restaurant Operations** - *Graduates will be able to manage and evaluate functional systems in lodging and restaurant operations.*
  - A. Students can identify front of the office and back of the office tasks, roles, and responsibilities of managing operations.
  - B. Students can operate and manage functional areas of lodging and restaurant operations effectively and efficiently.

- C. Students can describe the interrelationship of organizational structure and the operational strategy of a hotel and restaurants.
  - D. Students can list the functions of various other departments in the hotel and restaurants.
  - E. Students can describe the effective best practices in managing a hotel and restaurants.
  - F. Students can identify ways to market a product or service which contribute to increased guest satisfaction and experience.
  - G. Students can identify financial goals and results by analyzing the costs involved in managing hotel and restaurant operations.
2. **Critical Thinking** - *Graduates will be able to think critically and solve problems in the Hospitality and Tourism industry.*
- A. Students can define the problem by describing the symptoms and root of the problem.
  - B. Students can analyze information or interpret data to improve decisions-making skills.
  - C. Students can apply analytical and quantitative skills to evaluate business decisions in the Hospitality and Tourism industry.
3. **Teambuilding** - *Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.*
- A. Students can identify characteristics of an effective team.
  - B. Students can identify characteristics of an effective goal.
4. **Information Technology** - *Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.*
- A. Students can demonstrate the ability to use Excel to create financial budgets.
  - B. Students can demonstrate use of the Property Management System (PMS)
  - C. Students can recognize tools and techniques used to manage restaurants and hotels.
  - D. Students can apply Customer Relationship Management (CRM) models to better manage social media channels in the Hospitality and Tourism industry.
5. **Communication** - *Graduates will be able to communicate recommendations to management and other constituencies, orally and in writing.*
- A. Students can effectively communicate material in written format.
  - B. Students can effectively present material orally.
6. **Functional Knowledge** - *Graduates will have knowledge of basic business disciplines: accounting, economics, finance, management, management information systems, and marketing.*

## Matriculation Plan

The program is designed to be 125-127 credit hours which is somewhat lower than the other degree programs at CBE (i.e., 128). A suggested sequence of courses that includes courses required for the degree and courses meeting the West Virginia University General Education Curriculum (GEC) follows. Please note that there are no required GEC classes; however, some of the courses required for the degree may also fulfill GEC objectives. The actual program of study for each student will be determined by the student in consultation with the academic advisor. Some of the required courses may also fulfill a GEC requirement - for example, "ECON 202 may also count as GEC 4.

The table below indicates the matriculation plan.

| Semester One                                |          | Semester Two                                                |          |
|---------------------------------------------|----------|-------------------------------------------------------------|----------|
| BCOR 199 Introduction to Business           | 3        | ACCT 201 Principles of Accounting                           | 3        |
| CS 101 Intro to Computer Applications       | 4        | ECON 201 Microeconomics                                     | 3        |
| MATH 126A/B/C or 153 College Algebra        | 3 or 4   | ENGL 101 Composition and Rhetoric                           | 3        |
| SOCA 101 Introduction to Sociology          | 3        | MATH 150 or 154 or 155 or 156 Intro to Calculus (or higher) | 3 or 4   |
| GEC Objective 3, 5, 9                       | 3        | Natural Science w/ Lab                                      | 4        |
|                                             | 16 or 17 |                                                             | 16 or 17 |
| Semester Three                              |          | Semester Four                                               |          |
| ACCT 202 Principles of Accounting           | 3        | BCOR 299 Business Communications                            | 3        |
| ECON 202 Macroeconomics                     | 3        | BCOR 330 Information Systems and Technology                 | 3        |
| ECON 225 Business Statistics                | 3        | BCOR 340 Business Finance                                   | 3        |
| ENGL 102 Composition and Rhetoric           | 3        | BCOR 350 Principles of Marketing                            | 3        |
| PSYC 101 Introduction to Psychology         | 3        | BCOR 370 Managing Individuals and Teams                     | 3        |
|                                             | 15       |                                                             | 15       |
| Semester Five                               |          | Semester Six                                                |          |
| BCOR 320 Legal Environment of Business      | 3        | BCOR 360 Operations Management                              | 3        |
| MANG 330 HR Management Fundamentals         | 3        | MANG 360 International Business                             | 3        |
| HTOR 376 Hospitality and Tourism Leadership | 3        | HTOR 470 Tourism Management                                 | 3        |
| GEC Objective 2B, 3, 5, 9                   | 3        | HTOR 472 Hotel Operations Management                        | 3        |
| HTOR 471 Restaurant Operations              | 3        | GEC Objective 2B, 3, 5, 9                                   | 3        |
|                                             |          | HTOR 491 Professional Field Experience                      | 3        |
|                                             | 15       |                                                             | 18       |
| Semester Seven                              |          | Semester Eight                                              |          |
| BCOR 380 Business Ethics                    | 3        | BCOR 460 Contemporary Business Strategy                     | 3        |
| HTOR 474 Hospitality Revenue Management     | 3        | MANG 420 Business Information Systems                       | 3        |
| ACCT 331 Managerial Accounting              | 3        | MANG 434 Business Research Methods                          | 3        |
| GEC Objective 2B, 3, 5, 9                   | 3        | HTOR 480 Event Planning Practicum                           | 3        |
| HTOR 473 Hospitality Social CRM             | 3        | HTOR 491 Professional Field Experience                      | 3        |
|                                             | 15       |                                                             | 15       |

## Conclusion

The Hospitality and Tourism Management degree will provide additional job and career options for our students, as well as an opportunity to build a research agenda to aid the State's second largest industry. Furthermore, offering a Hospitality and Tourism Management degree will directly improve WVU's admission and retention initiatives by accommodating students with career aspirations in these areas.

Therefore, the College of Business and Economics requests permission to create the Hospitality and Tourism Management Degree.

**Attachment 1**

**Letter from the Davis College Indicating Awareness and Support for the CBE Hospitality and Tourism  
Management Degree Program**



September 5, 2103

To Whom It May Concern:

The Recreation, Parks & Tourism Resources Program supports the new major and degree program in Hospitality and Tourism being proposed by the College of Business & Economics. We have discussed the new program and major with B&E faculty and administrators, and the program does not overlap with Tourism courses already taught in the RPTR program. If you have any further questions, feel free to contact me by phone: (304) 293-7404; or through email: [David.Smaldone@mail.wvu.edu](mailto:David.Smaldone@mail.wvu.edu).

Sincerely,

Dr. Dave Smaldone

Associate Professor  
Program Chair, RPTR  
Recreation, Parks & Tourism Program  
Division of Forestry & Natural Resources  
PO Box 6125  
West Virginia University  
Morgantown, WV 26506-6125

**Division of Forestry and Natural Resources**

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**ATTACHMENT 2**  
**Associate Provost Elizabeth Dooley's Response to the Proposal**



Memorandum

DATE: August 28, 2013

TO: Dr. Karen Donovan, Associate Dean

FROM: Elizabeth A. Dooley, Associate Provost for Undergraduate Academic Affairs *EAD*

RE: Proposed Degree – Hospitality and Tourism Management Degree Program

Thank you for following up and presenting the intent to create a new degree: Hospitality and Tourism Management. Please address the following before submitting the proposal to the Faculty Senate Curriculum Committee.

1. Expand the rationale/need section. What are the national and state climates for such a degree program and the need in terms of job placements? You indicate it is a program of high need for the state of WV. Please provide documented evidence.
2. Before moving forward, request a letter of support from the Davis College supporting the new degree area. The current letters attached refer to the creation of the major.
3. What do you expect students to choose or gain when taking a 1 hour "Unrestricted Elective" In semesters 1, 3, and 4? Will such a configuration increase the number of total hours (unintended) for the degree since there are very few 1 hour courses? WVU, as you know 120 credits satisfy the minimum credit hour requirement for the bachelor's degree.
4. For the Assessment Plan, please include metrics for success, so that we are able to determine success based on pre-selected metrics.
5. You indicate that by fall 2015, another faculty member will be necessary to support the program. With the ensuing budget cuts, how do you propose to fund the new position?
6. I would suggest you include course titles when illustrating the curriculum.

**ATTACHMENT 3**

**Associate Provost Elizabeth Dooley's Memo Indicating Approval of the Intent to Plan**

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Memorandum

DATE: September 11, 2013  
TO: Dr. Karen Donovan, Associate Dean  
FROM: Elizabeth A. Dooley, Associate Provost for Undergraduate Academic Affairs  
RE: Proposed Degree- Hospitality and Tourism Management Degree Program

Thank you for addressing the items presented in the memo dated August 28, 2013. Clearly, you have articulated a sound rationale and a documented need for the degree program. I approve the Intent to Plan Proposal.

Once approved by the Faculty Senate, you will have to prepare the program summary for the WVU Board of Governors – final approval.

Best wishes as you prepare to launch this new degree program.

ACADEMIC AFFAIRS  
RESEARCH  
EXTENSION AND PUBLIC SERVICE

INFORMATION TECHNOLOGY

PO Box 6203 | Stewart Hall  
Morgantown, WV 26506-6203  
■ 304.293.7554

<http://provost.wvu.edu/>  
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**ATTACHMENT 4**  
**Letter of Support from the West Virginia Division of Tourism**



September 6, 2013

Frank DeMarco  
Coordinator/Teaching Assistant Professor  
College of Business & Economics  
Hospitality & Tourism Program  
West Virginia University  
P.O. Box 6025  
Morgantown, WV 26506

Dear Frank:

The West Virginia Division of Tourism is pleased to support the efforts by West Virginia University to elevate the Hospitality and Tourism Management program to academic major status.

As you know, tourism is a growing industry in West Virginia and one that is always in need of experts in the field. The "Economic Impact of Travel on West Virginia," study conducted in 2011 by Dean Runyan Associates for the Division of Tourism, supports this trend. Among the findings the report concludes:

- Travel spending by all overnight and day visitors in West Virginia was \$4.27 billion in the 2010 calendar year. This is the equivalent to approximately \$11.7 million per day.
- Travel spending in West Virginia has increased by 5.6 percent per year since 2000. In constant dollars (adjusted for inflation), travel spending has increased by 3.1 percent over the same period.
- During 2010, visitor spending in West Virginia directly supported about 44,400 jobs with earnings of \$988 million. Travel spending generated the greatest number of jobs in accommodations and food services; and arts, entertainment and recreation.

Tourism is an integral part of West Virginia's economy. Attracting and engaging visitors also provides the industry with numerous and ongoing opportunities to present and promote a positive and exciting image of our state. For many travelers, the "Wild and Wonderful" brand evokes images of breathtaking mountain scenery, exhilarating outdoor adventure, and a host of unique activities in arts and entertainment, culture and history, shopping and much more.

Recent additions of the Summit Bechtel Family National Scout Reserve and The Greenbrier Classic PGA Tournament have increased national and international awareness of West Virginia, attracting thousands of travelers to the state and increasing tourism interest and revenue both regional and statewide.

West Virginia's 150<sup>th</sup> birthday celebration in 2013 and the Emmy winning "Hatfields and McCoys" miniseries have also brought global attention to the state, attracting travelers interested in exploring the state's Civil War history and cultural roots.

As a result of these and other events and activities, the state has seen a rise in the demand for lodging, dining and recreation, and in turn an increasing need for more professionals in the field of hospitality and tourism to meet those demands.

The opportunity for tourism employment extends nationwide as well. The U.S. Travel Association's study, "Travel and the State of the Economy," presented at the 2012 West Virginia Governor's Conference on Tourism, found that travel is ranked No. 1 among all U.S. industry imports, generating \$1.9 trillion a year and supporting 14.4 million jobs nationwide.

In U.S. travel sector employment, 80 percent of jobs are filled by those with a bachelor's degree or higher, thus creating a competitive atmosphere in which knowledge and skills are crucial to obtaining employment in the industry. In addition, employment in the U.S. leisure and hospitality industry is projected to grow 2.1 percent to 3.3 percent through the year 2020, the U.S. Travel Association reported.

The West Virginia Division of Tourism acknowledges that West Virginia University offering a degree program in Hospitality and Tourism Management would greatly assist the state in providing qualified individuals for management positions in the ever-expanding hospitality and tourism industry.

We look forward to working with the university to assist in the training, education and employment of future tourism industry professionals.

Sincerely,



Betty B. Carver  
Commissioner

## **ATTACHMENT 5**

### **West Virginia University College of Business and Economics Admission Procedures for the Bachelor of Science in Business Administration Hospitality and Tourism Management Degree**

Students seeking admission to the Bachelor of Science in Business Administration- Hospitality and Tourism Management program offered by the College of Business and Economics (CBE) must make formal application to the program. Ideally, a student will apply for admission to the program when he/she:

- 1- Possesses an overall GPA of at least 2.0 (CBE student 2.0, other students 2.5), calculated using all baccalaureate level work completed at regionally accredited institution.
- 2- Will have completed a minimum of 45 semester hours at the end of the term in which the application for admission is filed.
- 3- Will have completed the following courses with a minimum grade of C (unless otherwise specified) at the end of the term in which the application for admission is filed:

ACCT 201, Principles of Accounting  
ACCT 202, Principles of Accounting  
CS 101, Intro- Computer Applications  
ECON 201, Principles of Microeconomics  
ECON 202, Principles of Microeconomics  
ECON 225, Elementary Business/ Economics Statistics (or STAT 211)  
ENGL 101, Composition and Rhetoric  
ENGL 102, Composition and Rhetoric  
MATH 126, College Algebra  
MATH 150, Applied Calculus (passing grade)

First-time freshmen, current students enrolled in other WVU colleges/ schools and newly admitted transfer students to WVU who are not eligible for admission directly into the program may seek admission to a pre-major in the CBE if they meet one of the following qualifying criteria:

- 1- First time freshmen- minimum high school GPA of 2.5 and standardized test score requirements of ACT 19R/20NR or SAT 910R/950NR.
- 2- Students with fewer than 29 credit hours- overall GPA of at least 2.5.
- 3- Students with 29-58 credit hours- overall GPA of at least 2.5 and Math 126, College Algebra, or a higher level of college math with a minimum grade of C
- 4- Students with 59 or more credit hours- overall GPA of at least 2.5 and no more than one term away from completing the prerequisites for admission to the program.

Students who do not qualify for admission under 1-4 above will be referred to the Undergraduate Advising Services Center (UASC) until they are eligible for admission.

**Memorandum****To:** Faculty Senate Executive Committee**From:** E. James Harner, Chair-Elect  
Senate Curriculum Committee**Date:** 10/28/13**RE:** Monthly Alterations Report**Action: Re-name Department.** The following departmental re-naming in the College of Business, Humanities, and Social Sciences at West Virginia University Institute of Technology has received administrative approval:

Old: Department of Physical Education

New: Department of Sport Studies.

Rationale: Change the name to accurately represent the current mission of the department.

- Assist with recruiting efforts
- Increase marketing endeavors
- Help with branding
- Decrease confusion with teacher education
- More adequately describe the two WVU degree programs taught by our department
- Modernize our academic offerings
- More adequately address our goals and strategic planning
- Properly align us with the academic offerings from CPASS at WVU

**Action: Alterations (Minor Changes)**

| Sub Code | Course Number | Action                        | Old                                                                                                                                                                                        | New                                                                                                                                                                                                 | Rationale                                                                                                                    | Effect Date |
|----------|---------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------|
| C&I      | 424           | Change prerequisite and hours | C&I 424. Approaches to Teaching Lang. 2 Hrs. PR: LING 101 and ENGL 102. Designed for prospective teachers of English and language arts. Focus is upon planning and implementing methods of | C&I 424. Approaches to Teaching Lang. 3 Hrs. PR: ENGL 102. Designed for prospective teachers of English and language arts. Focus is upon planning and implementing methods of teaching English as a | Drop LING 101 as a prerequisite to allow an increase in the hours of C&I 424/425. Increasing the hours of C&I 424 makes this | 201401      |

|      |     |                                             |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                             |        |
|------|-----|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|      |     |                                             | teaching English as a language. Materials and resources appropriate for public school instruction are analyzed and utilized.                                                                                                                                                                                                                | language. Materials and resources appropriate for public school instruction are analyzed and utilized.                                                                                                                                                                                                                                    | course consistent in terms of content demands with other English Education courses.                                                                                         |        |
| C&I  | 425 | Change hours and name change                | C&I 425. Approaches-Teaching Literature. 2 Hrs. PR: Junior standing. Designed for prospective teachers of English and language arts. Course focuses upon methodologies for teaching literature in public schools. Workshop format will provide opportunities for peer teaching activities as students apply methods of teaching literature. | C&I 425. Approaches to Teaching Lit. 3 Hours. PR: Junior standing. Designed for prospective teachers of English and language arts. Course focuses upon methodologies for teaching literature in public schools. Workshop format will provide opportunities for peer teaching activities as students apply methods of teaching literature. | Increasing the hours of C&I 425 makes this course consistent in terms of content demands with other English Education courses. The name change is a technical adjustment.   | 201401 |
| CS   | 121 | Change prerequisites and course description | CS 121 Computer Science 1. 4 Hrs. PR: (MATH 126A or MATH 126B or MATH 126C) and (MATH 128 or (MATH 113 and MATH 114)). Problem-solving methods and algorithm development; programming in high level language- designing, coding, debugging, and documenting programs using techniques of good programming style.                            | CS 121 Computer Science 1. 4 <u>Hrs.</u> Co-requisites: MATH 126 or MATH 123. Introduction to computer science, problem-solving techniques, algorithmic processes, software design, structured programming, object oriented design and programming.                                                                                       | Changed co-requisites to reflect the success of students taking MATH 123 instead of MATH 150 in completing CS 121; also altered catalog description but not course content. |        |
| FMAN | 413 | Change credit hours and prerequisite        | FMAN 413. Regional Silviculture. 2 Hrs. PR: FMAN 212 and PR or CONC: FMAN 311 and Forestry Major or consent. Major forest types of the United States; their composition, management, problems, and silvicultural treatment.                                                                                                                 | FMAN 413. Regional Silviculture. 3 Hrs. PR: FMAN 212 and PR or CONC: ( <u>FMAN 311 or FOR 310</u> ) and Forestry Major or consent. Major forest types of the United States; their composition, management, problems, and silvicultural treatment.                                                                                         | Amount of class time and course work required is consistent with a 3 credit course. Also FOR 310 is an acceptable prerequisite.                                             | 201401 |

|      |     |                                       |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                        |        |
|------|-----|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| FOR  | 310 | Change prerequisites and credit hours | FOR 310. Elements of Silviculture. 4 Hrs. PR: FOR 205 and WMAN 234. Basics of mensuration, site quality, tree and stand growth, forest structure, and development, intermediate treatments, natural disturbances and regeneration ecology, silviculture systems. (2 hr. lec., 4 hr. lab)                                      | FOR 310. Elements of Silviculture. 3 Hrs. PR: FOR 205. Basics of mensuration, site quality, tree and stand growth, forest structure, and development, intermediate treatments, natural disturbances and regeneration ecology, silviculture systems.                                                                                        | Students from other majors are taking the course and most do not have the WMAN 234 prerequisite; credit hours reduced to be consistent with actual contact hours.                                                      | 201408 |
| HRMG | 480 | Add prerequisite                      | HRMG 480. Collective Barg/Labor Relatns. 3 Hrs. Examination of the theory and practice of collective bargaining. Topics include economics and historical environment, labor law, unionization, contract negotiation, contract content patterns, conflict resolution, grievance handling, and an introduction to arbitration.  | HRMG 480. Collective Barg/Labor Relatns. 3 Hrs. PR: MANG 330. Examination of the theory and practice of collective bargaining. Topics include economics and historical environment, labor law, unionization, contract negotiation, contract content patterns, conflict resolution, grievance handling, and an introduction to arbitration. | Due to the heavy technical content of this course, it is necessary for students to have completed the introductory survey course in human resources (MANG 330 HR Management Fundamentals) prior to taking this course. | 201401 |
| ILR  | 505 | Remove prerequisite                   | ILR 505. Employment Law. 3 Hrs. PR: ILR 462. Survey of the legal principles guiding the employer-employee relationship. Examines laws regulating hiring, job opportunity, discrimination, affirmative action, sexual harassment, wages, benefits, privacy right, health, safety, employment at will, layoffs and termination. | ILR 505. Employment Law. 3 Hrs. Survey of the legal principles guiding the employer-employee relationship. Examines laws regulating hiring, job opportunity, discrimination, affirmative action, sexual harassment, wages, benefits, privacy right, health, safety, employment at will, layoffs and termination.                           | Removing prerequisite as it is not applicable to this course of Employment Law.                                                                                                                                        | 201401 |

|     |     |                                      |                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                |                                                            |        |
|-----|-----|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------|
| ILR | 506 | Remove prerequisite and change title | ILR 506. Performance Management/Training. 3 Hrs. PR: ILR 462. Development of individual employees in an organization; performance evaluation, discipline of problem employees, identifying training needs, and design and delivery of training programs.                                                    | ILR 506. Performance Management. 3 Hrs. Development of individual employees in an organization; performance evaluation, discipline of problem employees, identifying training needs, and design and delivery of training programs.                                                             | Prerequisite no longer applicable. Update of course title. | 201401 |
| ILR | 507 | Remove prerequisite                  | ILR 507. Conflict Management Processes. 3 Hrs. PR: ILR 462. Sources of conflict in the workplace and processes utilized to deal with that conflict. Theories of conflict management, industry practices, and specific techniques for productive channeling of conflict. Significant experiential component. | ILR 507. Conflict Management Processes. 3 Hrs. Sources of conflict in the workplace and processes utilized to deal with that conflict. Theories of conflict management, industry practices, and specific techniques for productive channeling of conflict. Significant experiential component. | Prerequisite no longer applicable.                         | 201401 |
| ILR | 508 | Remove prerequisite                  | ILR 508. Organizational Change/Renewal. 3 Hrs. PR: ILR 462. Organizational evolution as a result of multiple change process, including employee involvement, empowerment, high performance organizations, process consulting, and goal setting. Emphasis on organizational and union relationships.         | ILR 508. Organizational Change/Renewal. 3 Hrs. Organizational evolution as a result of multiple change process, including employee involvement, empowerment, high performance organizations, process consulting, and goal setting. Emphasis on organizational and union relationships.         | Prerequisite no longer applicable.                         | 201401 |

|     |     |                     |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                |                                     |        |
|-----|-----|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------|
| ILR | 520 | Remove prerequisite | ILR 520. HR Information Systems. 3 Hrs. PR: ILR 462. Use of computers for human resource management; HRIS planning, development and implementation, evaluating existing software; development of a database unique to human resource management.                                                                                            | ILR 520. HR Information Systems. 3 Hrs. Use of computers for human resource management; HRIS planning, development and implementation, evaluating existing software; development of a database unique to human resource management.                                                                                            | Prerequisite no longer applicable.  | 201401 |
| ILR | 522 | Remove prerequisite | ILR 522. International Industrial Relation. 3 Hrs. PR: ILR 462. Analyzes the human resource and labor relations practices of firms and economies as they relate to the global market; basis of international business, legal/governmental environmental, labor movements, and industrial relations practices.                               | ILR 522. International Industrial Relation. 3 Hrs. Analyzes the human resource and labor relations practices of firms and economies as they relate to the global market; basis of international business, legal/governmental environmental, labor movements, and industrial relations practices.                               | Course prerequisite not applicable. | 201401 |
| ILR | 530 | Remove prerequisite | ILR 530. Compensation Issues. 3 Hrs. PR: ILR 462. Seminar in compensation designed to develop further understanding of compensation theory and practice. Topic areas will include labor supply, wage theory, legal constraints, motivation, equity theory, organizational development as well as compensation structure and administration. | ILR 530. Compensation Issues. 3 Hrs. Seminar in compensation designed to develop further understanding of compensation theory and practice. Topic areas will include labor supply, wage theory, legal constraints, motivation, equity theory, organizational development as well as compensation structure and administration. | Course prerequisite not applicable. | 201401 |

|     |     |                     |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                        |                                      |        |
|-----|-----|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------|
| ILR | 534 | Remove prerequisite | ILR 534. Work Grp Dynmcs Leadrshp. 3 Hrs. PR: ILR 462. Small group or individual research on topics related to leadership and group dynamics in the work environment including training and other human relations programs.                                                                                        | ILR 534. Work Grp Dynmcs Leadrshp. 3 Hrs. Small group or individual research on topics related to leadership and group dynamics in the work environment including training and other human relations programs.                                                                                         | Course prerequisite not applicable.  | 201401 |
| ILR | 540 | Change prerequisite | ILR 540. Arbitration Theory/ Prac. 3 Hrs. PR: ILR 462 and consent. Study of the purpose of arbitration, trends, principles of contract construction, hearing procedure evidence, remedies, training and education of arbitrators, training of advocates, and decision writing. Students will arbitrate mock cases. | ILR 540. Arbitration Theory/ Prac. 3 Hrs. PR: Consent. Study of the purpose of arbitration, trends, principles of contract construction, hearing procedure evidence, remedies, training and education of arbitrators, training of advocates, and decision writing. Students will arbitrate mock cases. | ILR 462 prerequisite not applicable. | 201401 |
| ILR | 543 | Remove prerequisite | ILR 543. Negotiation Strategy. 3 Hrs. PR: ILR 462. Theory and practice of both principled negotiations and position bargaining; extensive role play and technique building exercises for individual and team negotiations; detailed preparation methods for all types of personal and professional negotiations.   | ILR 543. Negotiation Strategy. 3 Hrs. Theory and practice of both principled negotiations and position bargaining; extensive role play and technique building exercises for individual and team negotiations; detailed preparation methods for all types of personal and professional negotiations.    | Prerequisite no longer required.     | 201401 |

|      |     |                                      |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                              |                                                                                                                |        |
|------|-----|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------|
| ILR  | 544 | Remove prerequisite and change title | ILR 544. Benefits. 3 Hrs. PR: ILR 462. Considers employee benefits from the perspective of the industrial relations specialist who is responsible for articulating and administering a corporate program. Includes study of all benefits covered by major federal legislation. | ILR 544. Benefits Management. 3 Hrs. Considers employee benefits from the perspective of the industrial relations specialist who is responsible for articulating and administering a corporate program. Includes study of all benefits covered by major federal legislation. | Clarification of course title (added word Management) and removal of unnecessary prerequisite.                 | 201401 |
| MKTG | 420 | Change prerequisite                  | MKTG 420. Sales Management. 3 Hrs. PR: BCOR 350. Concentrates on the managerial responsibilities of sales manager for directing, motivating, and controlling a sales force plus the techniques of selling, including objections and closing.                                   | MKTG 420. Sales Management. 3 Hrs. PR: MKTG 320. Concentrates on the managerial responsibilities of sales manager for directing, motivating, and controlling a sales force plus the techniques of selling, including objections and closing.                                 | Sales Management builds on the content of Marketing 320 Personal Selling.                                      | 201401 |
| PATH | 329 | Change credit hours                  | PATH 329. Clinical Chemistry I. 1 Hr. Lectures in clinical chemistry analysis, clinical significance, and implications of diagnosis.                                                                                                                                           | PATH 329. Clinical Chemistry I. 2 Hrs. Lectures in clinical chemistry analysis, clinical significance, <u>clinical instrumentation</u> , and implications of diagnosis.                                                                                                      | Additional content added to course on clinical instrumentation.                                                | 201401 |
| POLS | 351 | Remove prerequisites                 | POLS 351. Russian/Post-Soviet Politics. 3 Hrs. PR: POLS 250 or POLS 260 or consent. Survey of politics and government in Russia and post-Soviet states.                                                                                                                        | POLS 351. Russian/Post-Soviet Politics. 3 Hrs. Survey of the politics and government in Russia and post-Soviet states.                                                                                                                                                       | Remove prerequisites to create uniformity across the upper-level courses in the comparative politics sequence. | 201401 |

|      |     |                                      |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                          |                                                                                                                            |        |
|------|-----|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------|
| POLS | 352 | Remove prerequisites                 | POLS 352. Politics of the European Union. 3 Hrs. PR: POLS 250 or consent. Examination of the evolution of European integration and the political and institutional dynamics of the contemporary European Union.                     | POLS 352. Politics of the European Union. 3 Hrs. Examination of the evolution of the European integration and the political and institutional dynamics of the contemporary European Union.                                               | Remove prerequisites to create uniformity across the upper-level courses in the comparative politics sequence.             | 201401 |
| POLS | 353 | Remove prerequisites                 | POLS 353. Western Democratic Governments. 3 Hrs. PR: POLS 250 or consent. Cross-national and/or country-based analysis of selected western democracies, such as Canada, Great Britain, France, Italy, and the European Union.       | POLS 353. Western Democratic Governments. 3 Hrs. Cross-national and/or country-based analysis of selected western democracies, such as Canada, Great Britain, France, Italy, and the European Union.                                     | Remove prerequisites to create uniformity across the upper-level courses in the comparative politics sequence.             | 201401 |
| RPTR | 140 | Change credit hours and course name. | RPTR 140. Adventure West Virginia. 3 Hrs. This course provides incoming WVU freshmen with the information and tools helpful for a successful transition from high school to college through a field-based, experiential curriculum. | RPTR 140. Freshman Outdoor Orientation. 2 Hrs. This course provides incoming WVU freshmen with the information and tools helpful for a successful transition from high school to college through a field-based, experiential curriculum. | Course classification changed and the credit hours are being reduced and the name is being altered to reflect this change. | 201308 |

### Course Drops

LAW 761. Criminal Procedure.

PATH 460. Clinical Laboratory Instrumentation.

## **Memorandum**

Date: October 28, 2013

To: Faculty Senate Executive Committee

From: Lisa Weihman, Chair  
General Education Curriculum Oversight Committee

Re: GEC Actions

The General Education Curriculum Oversight Committee met on September 30 and recommends the following courses for Faculty Senate approval:

### **Approved New GEC Courses:**

A&VS 275, Companion Animal Science (Obj. 2C & 7)  
ART 191, First-Year Seminar – CCA (Obj. 6F)  
JRL 115, Journalism Orientation (Obj. 6F)  
MUSC 191, First-Year Seminar – CCA (Obj. 6F)  
RELG 302, Studies in Islamic Scripture (Obj. 3 & 9)  
THET 191, First-Year Seminar – CCA (Obj. 6F)

### **Approved New GEC Writing Course:**

NSG 360, Ethics and Health Policy

### **GEC Objectives** (for information only)

1. Communication (ENGL 101 & 102, or ENGL 103 only; W courses evaluated separately)
2. Basic Math & Scientific Inquiry (Total: 13+ hr, including 1 Lab) [Note 2A = Math & Stats (3+ hr required); 2B = Natural & Physical Sciences (7+ hr required); 2C = Natural Resources & Environment (may be used toward Total)]
3. The Past and Its Traditions (3+ hr)
4. Contemporary Society (3+ hr)
5. Artistic Expression (3+ hr)
6. The Individual in Society (4+ hr) [Note 6F = First Year Seminar (1+ hr required)]
7. American Culture (3+ hr)
8. Western Culture (3+ hr)
9. Non-Western Culture (3+ hr)

W. Writing (1 course, audit/application requires separate “W” form)

## **Memorandum**

Date: October 28, 2013

To: Faculty Senate Executive Committee

From: Lisa Weihman, Chair  
General Education Curriculum Oversight Committee

Re: GEC Audits – For Information Only

The GEC Oversight Committee met on September 30 and passed the following courses for GEC Audit:

### **GEC Successful Audits:**

ENGL 131 – Poetry and Drama (Obj. 5)

GEOG 110 – Environmental Geoscience (Obj. 2B & 4)

GEOL 110 – Environmental Geoscience (Obj. 2B & 4)

### **GEC Objectives:**

1. Communication (ENGL 101 & 102, or ENGL 103 only; W courses evaluated separately)
2. Basic Math & Scientific Inquiry (Total: 13+ hr, including 1 Lab) [Note 2A = Math & Stats (3+ hr required); 2B = Natural & Physical Sciences (7+ hr required); 2C = Natural Resources & Environment (may be used toward Total)]
3. The Past and Its Traditions (3+ hr)
4. Contemporary Society (3+ hr)
5. Artistic Expression (3+ hr)
6. The Individual in Society (Total: 4+ hr) [Note 6F = First Year Seminar (1+ hr required)]
7. American Culture (3+ hr)
8. Western Culture (3+ hr)
9. Non-Western Culture (3+ hr)
- W. Writing (1 course, audit/application requires separate “W” form)