

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: COHP

Dept/Division: Public Health

Alpha Designator/Number: PH 617

 Graded CR/NC

Contact Person: William F. Pewen

Phone: 696-3743

NEW COURSE DATA:

New Course Title: Methods in Applied Comparative Study

Alpha Designator/Number:

P H 6 1 7

Title Abbreviation:

M e t h C o m p S t u d y

(Limit of 25 characters and spaces)

Course Catalog Description:
(Limit of 30 words)

Examination of methods to determine the relative value of preventive, diagnostic and treatment alternatives for efficacy, cost, and practical application. Models include meta-analysis, comparative effectiveness trials, and data mining.

Co-requisite(s): None

First Term to be Offered: Fall 2015

Prerequisite(s): PH 611, PH 621

Credit Hours: 3

Course(s) being deleted in place of this addition (must submit course deletion form):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head <u>W F Pewen</u>	Date <u>3/4/15</u>
Registrar <u>Roberta Ferguson 005122</u>	Date <u>3/4/15</u>
College Curriculum Chair <u>Jurman Grayson</u>	Date <u>3/13/15</u>
Graduate Council Chair _____	Date _____

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College: COHP

Department/Division: Public Health

Alpha Designator/Number: PH 617

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

William F. Pewen, Ph.D., M.P.H., future faculty, and such as the dean and program director shall designate

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

Not applicable

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

Not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

Not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

College of Health Professions is responsible for hiring faculty. No other resources required at this time.

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Syllabus

7. COURSE OUTLINE (May be submitted as a separate document)

See Syllabus

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Rogers, MAM. Comparative Effectiveness Research. (2013) Oxford University Press. ISBN 978-0-19-998604-0

Ashton, CM, and Wray, NP. Comparative Effectiveness Research (2013) Oxford University Press. ISBN 978-0-19-996856-5

Borenstein, M., Hedges, LV, Higgins, JPT, and Rothstein, HR. Introduction to Meta Analysis. (2009) John Wiley & Sons, Ltd. ISBN: 978-0470057247

Cerrito, P and Cerrito, J. Clinical Data Mining for Physician Decision Making and Investigating Health Outcomes: Methods for Prediction and Analysis. (2010) IGI Global ISBN 978-1615209057

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Lecture; class discussion; course readings; research assignments.

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10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Periodic Quizzes
Final examination

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Brown J, Kahn M, Toh S. Data quality assessment for comparative effectiveness research in distributed data networks. *Medical care*. 2013;51(8 0 3):S22-29.

Cashman SB, Adeky S, Allen AJ, et al. The Power and the Promise: Working With Communities to Analyze Data, Interpret Findings, and Get to Outcomes. *American Journal of Public Health*. 2008;98(8):1407-1417.

Connor JT, Luce BR, Broglio KR, et al. Do Bayesian adaptive trials offer advantages for comparative effectiveness research? Protocol for the RE-ADAPT study. *Clinical Trials (London, England)*. 2013;10(5):807-827.

Djulgovic M, Djulgovic B. Implications of the principle of question propagation for comparative-effectiveness and “data mining” research. *JAMA*. 2011;305(3):298-299.

Huang TC-K, Liu C-C, Chang D-C. An empirical investigation of factors influencing the adoption of data mining tools. *International Journal of Information Management*. 2012;32(3):257-270.

Eapen ZJ, Lauer MS, Temple RJ. The imperative of overcoming barriers to the conduct of large, simple trials. *JAMA*. 2014;311(14):1397-1398.

Froelicher VF, Perdue S, Pewen W, Risch M. Application of meta-analysis using an electronic spread sheet to exercise testing in patients after myocardial infarction. *Am J Med*. 1987 Dec;83(6):1045-54.

Fung V, Brand R, Newhouse J, Hsu J. Using Medicare Data for Comparative Effectiveness Research – Opportunities and Challenges. *The American journal of managed care*. 2011;17(7):488-496.

Laken MA, Dawson R, Engelman O, Lovelace O, Way C, Egan BM. Comparative effectiveness research in the “real” world: Lessons learned in a study of treatment-resistant hypertension. *Journal of the American Society of Hypertension : JASH*. 2013;7(1):95-101.

Longo DR, Woolf SH. Rethinking the information priorities of patients. *JAMA*. 2014;311(18):1857-1858.

Platt R, Kass NE, McGraw D. Ethics, regulation, and comparative effectiveness research: Time for a change. *JAMA*. 2014;311(15):1497-1498.

Safford MM. Comparative effectiveness research and outcomes of diabetes treatment. *JAMA*. 2014;311(22):2275-2276.4.

Shegog R, Markham CM, Peskin MF, Johnson K, Cuccaro P, Tortolero SR. It’s Your Game...Keep It Real: Can innovative public health prevention research thrive within a comparative effectiveness research framework? *The Journal of Primary Prevention*. 2013;34(0):89-108.

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Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Public Health

Course Number and Title: PH 617 - Methods in Applied Comparative Study

Catalog Description: Examination of methods to determine the relative value of preventive, diagnostic and treatment alternatives for efficacy, cost, and practical application. Models include meta-analysis, comparative effectiveness trials, and data mining.

Prerequisites: PH 611, PH 621

First Term Offered: Fall 2015

Credit Hours: 3

COURSE TITLE/NUMBER	Methods in Applied Comparative Study PH 617
SEMESTER/YEAR	Fall 2015
DAYS/TIME	Monday 1:30 – 4:30 pm
CREDIT HOURS	3
LOCATION	1599 CHH
INSTRUCTOR	William Pewen, Ph.D., MPH
OFFICE/PHONE	218 Prichard Hall 304-696-3743
E-MAIL	pewen@marshall.edu
OFFICE HOURS	Tues 3-5, Wed 4-6, Fri 9-10. Others by arrangement.
CFE/UNIVERSITY POLICIES	By enrolling in this course, you agree to the <i>Marshall University Policies</i> , and thus it is essential that you understand them. Please review these at the Academic Affairs website: http://muwww-new.marshall.edu/academic-affairs/policies/

COURSE DESCRIPTION: FROM CATALOG

Examination of methods to determine the relative value of preventive, diagnostic and treatment alternatives for efficacy, cost, and practical application. Models include meta-analysis, comparative effectiveness trials, and data mining.

PREREQUISITES:

Successful completion of PH 611 (Epidemiology) and PH 621 (Statistical Methods I), or their equivalents.

STUDENT LEARNING OUTCOMES IDENTIFIED IN THIS COURSE:

- Upon completion of the course, students will:
1. Demonstrate understanding of the value and application of comparative value study to improve prevention, diagnosis and treatment.
 2. Demonstrate understanding of the appropriate application and methodology of meta-analysis, comparative efficacy and data mining.

COURSE STUDENT LEARNING OUTCOMES	HOW PRACTICED IN THIS COURSE	HOW ASSESSED IN THIS COURSE
Goal 1. Demonstrate understanding of the value and application of comparative value study to improve prevention, diagnosis and treatment.	Lecture; class discussion; course readings.	Quiz, Final Examination.

Goal 2. Demonstrate understanding of the appropriate application and methodology of meta-analysis, comparative efficacy and data mining.	Lecture; class discussion; course readings; research assignments.	Quiz, Final Examination.
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REQUIRED TEXTS, ADDITIONAL READING, AND OTHER MATERIALS

- Borenstein, M., Hedges, LV, Higgins, JPT, and Rothstein, HR. Introduction to Meta Analysis. (2009) John Wiley & Sons, Ltd. ISBN: 978-0470057247
- Rogers, MAM. Comparative Effectiveness Research. (2013) Oxford University Press. ISBN 978-0-19-998604-0
- Additional assigned journal articles and reports

RECOMMENDED MATERIALS

Personal computer and smartphone (iPhone or Android) are required.

Additional Resource Texts:

- Ashton, CM, and Wray, NP. Comparative Effectiveness Research (2013) Oxford University Press. ISBN 978-0-19-996856-5
- Cerrito, P and Cerrito, J. Clinical Data Mining for Physician Decision Making and Investigating Health Outcomes: Methods for Prediction and Analysis. (2010) IGI Global ISBN 978-1615209057

COURSE REQUIREMENTS / DUE DATES

1. Quizzes (Weeks 4, 7, 9, 11, 13)
2. Final Exam (Week 16)

GRADING POLICY

Quizzes (5 given, lowest score dropped)	40%
Final Exam	60%

Grades will be determined by the following scale:

90-100	A
80-89	B
70-79	C
60-69	D
<60	F

ATTENDANCE POLICY

This class meets weekly. While attendance is not required, lectures may not be replicated on Blackboard, and in-class assessments are graded, thus students are encouraged to maintain regular attendance.

ADDITIONAL POLICIES

- 1. Accountable material and preparation.** Class sessions are conducted based on the expectation that students complete all appropriate readings and/or assignments as scheduled. This facilitates better questions, discussion, and learning. Exam and quiz questions may be based on both out-of-class assignments and material presented in class.
- 2. Electronic devices.** Electronic devices (smartphones, PDAs, laptops, etc.) can be a valuable asset in the classroom. However, if used inappropriately, these can be a distraction. Students should utilize these devices in class only for educational purposes, and are requested to be unobtrusive in their use (including silencing cell phone ringers). Please note that social media, “tweeting”, and real time chat are not appropriate in the classroom unless part of a classroom exercise.
- 3. Intellectual property notice:** Many materials used in this class are copyrighted, while others represent content and product of the instructor and/or Marshall University. While students may share notes and engage in discussions regarding their work in the course, recording or distribution of course content is not permitted. Students should enquire of the instructor for clarification regarding exceptions.
- 4. Academic integrity:** Students should refer to the Student Handbook to ensure understanding of policies concerning academic honesty and integrity, including plagiarism and cheating. Unless specified by the instructor, no electronic devices, notes, or other non-approved assistance is permitted during any exam.
- 5. Disability accommodation.** The instructor will endeavor to accommodate students with a disability. It is requested that the student notify the instructor at the earliest possible time regard anticipated assistance which may be required.
- 6. Vigilance.** Students are expected to access their MU e-mail address and MU On-line regularly for information related to the course.

7. **Missed classes:** If you are absent, it is the student's responsibility to find out from a classmate what notes, handouts, assignments, or other course material you missed and to make arrangements to receive those.
8. **Make-up assignments and exams:** Students who miss scheduled exams or assignments may make them up in the event of a University-excused absence or medical emergency. In any other situation, a student may request a make-up, but if the request is granted, such may be a different exam or assignment.
9. **Office hours:** As posted and by appointment.
10. **Inclement Weather:** If inclement weather results in class cancellation, students are directed to carefully review posted material posted for that session, as we will endeavor to maintain the planned course schedule, including exams which may include that content.

Projected Course Schedule

Week	Date	Topic
1	Aug 24	The Imperatives of Value-Based Research
2	Aug 31	Innovation Evidence – Drug & Device Approval
3	Sep 7	HOLIDAY – Labor Day
4	Sep 14	Evidence-Based Medicine – Prevention, Treatment & Payment
5	Sep 21	Meta-Analysis: Application, Effect Sizes & Precision
6	Sep 28	Meta-Analysis: Fixed and Random Effects, Heterogeneity
7	Oct 5	Meta-Analysis: Complex Data Structures
8	Oct 12	Meta-Analysis: Other Issues
9	Oct 19	CER: Topics & Populations, Effects & Outcomes
10	Oct 26	CER: Designs & Execution
11	Nov 2	CER: Evaluation & Reporting
12	Nov 9	Data Mining: Applications / Sources, Sampling, Validity
13	Nov 16	Data Mining: Analytical Techniques / Consent, Legal & Ethics Issues
14	Nov 23	HOLIDAY - Thanksgiving Break
15	Nov 30	Review
16	Dec 7	Final Exam