

CEBS CURRICULUM COMMITTEE
3:00 pm – December 2, 2008
Dean's Conference Room

I. Approval of Minutes of the October 7, 2008 CEBS Curriculum Committee
(Found on the CEBS Home Page-click on faculty and staff then meeting minutes and agendas.)

II. New Business

From the Department of Educational Administration, Leadership & Research

- A. Delete a Course – EDFN 270, Honors Social & Philosophical Issues in Education
- B. Delete a Course – EDAD 581, Organization and Administration of Occupational Education
- C. Delete a Course – EDAD 698, Practicum in Educational Administration and Supervision
- D. Create a New Course – EDAD 706, Educational leadership and Reform
- E. Create a New Course – EDAD 707, Educational Leadership Policies and Politics
- F. Create a New Course – EDAD 708, Acquiring, Managing and Utilizing Fiscal Resources in Districts and Systems
- G. Create a New Course –EDAD 710, School Leadership and Technology Planning for School Improvement

From the Department of Special Instructional Programs

- A. Suspend EXED 417G, Assessment and Curriculum I for Students with Moderate and Severe Disabilities
- B. Suspend EXED 418G, Assessment and Curriculum II for Students with Moderate and Severe Disabilities
- C. Delete EXED 491, Lecture in Lieu of Student Teaching
- D. Revise Course Title - EXED 518, Seminar: Contemporary Issues in Special Education
- E. Revise Course Title – EXED 535, Curriculum for Moderate Retarded

From the Department of Curriculum and Instruction

- A. Create a New Course – SMED 340, Perspectives on Mathematics and Science
- B. Create a New Course – SMED 360, Research Methods for Math and Science Teachers
- C. Create a New Course – SMED 470, Project-Based Instruction
- D. Create a New Course – SMED 489, SMED Student Teaching Seminar
- E. Create a New Major Program – Science and Mathematics Education

III. Other Business

- A. Two Reports from Alternate Admissions Subcommittee

For Information Only—From the Department of Physics and Astronomy – College of Science and Engineering -- Proposal to Create a New Major Program – Middle School Science Education

**College of Education & Behavioral Sciences
Department of Educational Administration, Leadership, & Research
Proposal to Delete a Course
(Consent Item)**

Contact Person: Jeanne R. Fiene, jeanne.fiene@wku.edu 5-4890

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EDFN 270
- 1.2 Course title: Honors Social & Philosophical Issues in Education
- 1.3 Credit hours: 3

2. Rationale for the course deletion:

This course is no longer taught.

3. Effect of course deletion on programs or other departments, if known:

Since this course has not been offered since 1993, deleting it will not affect our program or those of other departments.

4. Proposed term for implementation: Spring 2009

5. Dates of prior committee approvals:

Department of EALR	<u>11/11/2008</u>
CEBS Curriculum Committee	_____
Professional Education Council	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

**College of Education & Behavioral Sciences
Department of Educational Administration, Leadership, & Research
Proposal to Delete a Course
(Consent Item)**

Contact Person: Jeanne R. Fiene, jeanne.fiene@wku.edu 5-4890

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EDAD 581
- 1.2 Course title: Organization & Administration of Occupational Education
- 1.3 Credit hours: 3

2. Rationale for the course deletion:

This course is no longer taught.

3. Effect of course deletion on programs or other departments, if known:

Since this course has not been offered since 1993, deleting it will not affect our program or those of other departments.

4. Proposed term for implementation: Spring 2009

5. Dates of prior committee approvals:

<u>Department of EALR</u>	<u>11/11/2008</u>
<u>CEBS Curriculum Committee</u>	_____
Professional Education Council	_____
Graduate Council	_____
University Senate	_____

Attachment: Course Inventory Form

**College of Education & Behavioral Sciences
Department of Educational Administration, Leadership, & Research
Proposal to Delete a Course
(Consent Item)**

Contact Person: Jeanne R. Fiene, jeanne.fiene@wku.edu 5-4890

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EDAD 698
- 1.2 Course title: Practicum in Educational Administration and Supervision
- 1.3 Credit hours: 3

2. Rationale for the course deletion:

This course is no longer taught.

3. Effect of course deletion on programs or other departments, if known:

Since this course has not been offered since 1989, deleting it will not affect our program or those of other departments.

4. Proposed term for implementation: Spring 2009

5. Dates of prior committee approvals:

Department of EALR	<u>11/11/2008</u>
CEBS Curriculum Committee	_____
Professional Education Council	_____
General Education Committee	_____
University Senate	_____

Attachment: Course Inventory Form

College of Education and Behavioral Sciences
Department of Educational Administration, Leadership, and Research
Proposal to Create a New Course
(Action Item)

Contact Person: Jeanne Fiene e-mail: Jeanne.fiene@wku.edu Phone: 745-2942

1. Identification of proposed course

- 1.1 Prefix and number: EDAD 706
- 1.2 Title: Educational Leadership and Reform
- 1.3 Abbreviated title: Ed Leadership and Reform
- 1.4 Credit hours and contact hours: 3
- 1.5 Type of course: S – Seminar
- 1.6 Prerequisite: EDLD 700

Catalog course listing: Leadership for school reform and organizational development.
Study of the challenges, strategies, and application of organizational theory for P-12 executive leadership in leading systemic change initiatives.

2. Rationale

Reason for developing the proposed course: This course is primarily intended as an elective in the P-12 administration strand for the Ed.D. in Educational Leadership. This course is designed to enhance the knowledge and ability of P-12 leadership candidates in the Ed.D. program to integrate and apply organizational theory to school reform and organizational development initiatives particularly at the district level.

- 2.1 Projected enrollment in the proposed course: 15-20 (only for students in the Ed.D. Program).
- 2.2 Relationship of the proposed course to courses now offered by the department: The Department currently offers EDAD 696 Advanced Organizational Theory. This course is a general survey course of organizational theory designed primarily for building level administrators rather than district level leadership. The current course does not focus on application of theory.
- 2.3 Relationship of the proposed course to courses offered in other departments: There are master's level courses in other departments (i.e., PSY 572 Organizational Psychology, BA 510 Organizational Theory, and COMM 581 Applied Organizational Communication) that address some of these topics but none of them at the doctoral level or with a focus on the specific issues of P-12 leadership.
- 2.4 Relationship of the proposed course to courses offered in other institutions: This course is similar to doctoral level courses offered at other institutions including the following examples:

University of Louisville

EDTD 664 Facilitating Change in Organizations

Consists of the study of organizations as systems and how organizations change and Develop in reaction to internal and external forces. The purpose of the course is to provide students with the knowledge and skills necessary to diagnose the need for, and facilitate the implementation of, change in organizations. Emphasis will be on both theoretical and practical aspects of organizational change in a global marketplace and the role of the HRD practitioner in implementing change.

Indiana State University

PA 641 Seminar in Organizational Development. Analysis of the theories of organizational development (OD) and their applications in governmental agencies. The role of the public manager in the improvement of organizational and personnel effectiveness will be emphasized.

University of Tennessee

EA 680 Administration of Complex Organizations. Concepts and theoretical

formulations to understand, analyze, evaluate, and change complex educational programs and organizations.

Montclair State University

EDCO 804 Organizational Change, Policy, and Leadership

Doctoral students will learn to analyze complex organizational patterns, situations, and policies that define and affect diverse educational settings in the U.S. and in other places. Students will examine various models of leadership, theories, and research on change models, and the processes of educational policy formation. Students will develop an understanding of their own role as change agents. There will be a field component for this course in which the students will conduct research on the development, implementation, and/or evaluation of a plan for change in an educational setting.

University of Illinois – Springfield

PAD 602 Advanced Seminar in Organizational Behavior in Public Systems.

Organizing processes; the connections and interactions between elements and parts of organizations; diagnosing organizational problems and managing change; leadership behavior and effectiveness; expectations and values; job satisfaction and individual performance; organizational culture; and norms and values.

3. Discussion of proposed course

3.1 Course objectives: The objectives of this course are that the student will:

- Understand and be able to apply theories of communication, culture, change, and systems.
- Demonstrate the ability to analyze and diagnose organizational problems utilizing a variety of appropriate strategies and techniques.
- Understand and be able to design effective organization development.
- Demonstrate the ability to select and use successful organizational development strategies.
- Understand and be able to create organizational design for success.
- Demonstrate the ability to devise leadership strategies to solve typical organizational problems.
- Understand and be able to select and implement strategic solution interventions for organizational improvement.

3.2 Content outline: Topics include the following:

- Organizational communication
- Organizational culture
- Systems theory
- Strategies and techniques for organizational analysis
- Organizational leadership at the executive level
- Organizational problem-solving and decision-making
- Leading and managing change
- Organizational design and structure
- Diversity and effective organizational design in a global society
- Organizational development
- Strategic solution interventions

3.3 Student expectations and requirements: Students will be expected to read a variety of assigned materials, journals, articles, and texts, and be prepared to discuss these in class. Students will be given assignments that will require them to gather data, research topics, lead presentations, and participate in simulations to apply knowledge and skills learned.

3.4 Tentative texts and course materials:

4. Resources

- 4.1 Library resources: There will be no need for additional library resources.
- 4.2 Computer resources: There will be no need for additional computer resources.

5. Budget implications

- 5.1 Proposed method of staffing: This course should load at the graduate course level. Staff will be drawn from the Ed.D in Educational Leadership faculty.
- 5.2 Special equipment needed: None
- 5.3 Expendable materials needed: None
- 5.4 Laboratory supplies needed: None

6. Proposed term for implementation: Spring 2009

Dates of prior committee approvals:

Department of EALR	<u>1/17/07</u>
CEBS Curriculum Committee	_____
Professional Education Council	_____
Graduate Council	_____
University Senate	_____

Attachments: Bibliography, Library Resources Form, [Course Inventory Form](#)

Bibliography

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- Hall, G. & Hord, S. (2001). *Implementing change*. Boston: Allyn and Bacon.
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- Morgan, G. (1997). *Imag-i-zation*. Thousand Oaks, CA: Sage Publications.

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College of Education and Behavioral Sciences
Department of Educational Administration, Leadership and Research
Proposal to Create a New Course
(Action Item)

Contact Person: Jeanne Fiene, Jeanne.fiene@wku.edu, 745-2942

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: EDAD 707
- 1.2 Course title: Educational Leadership Policies and Politics
- 1.3 Abbreviated course title: Ed Policy and Politics
- 1.4 Credit hours and contact hours: 3
- 1.5 Type of course: Lecture
- 1.6 Prerequisite: EDLD 700 or permission
- 1.7 Course catalog listing: Designed to equip students with analytical skills for confronting leadership issues that require the application or creation of policy in diverse settings. Examines the exercise of political power in education and the impact of politics on managing and leading educational institutions.

2. Rationale:

- 2.1 Reason for developing the proposed course: The proposed course will be an elective for those interested in P-12 administration and the Ed.D. in Educational Leadership. The course is designed to enhance the knowledge and ability of the school and district leadership candidates to successfully navigate the political processes associated with school leadership and to proactively design, implement, and evaluate policies in their schools and districts. Since the publication of *A Nation at Risk*, the accountability movement, and increased governmental action and interest in education from the Federal as well as state level, administrators have found it even more necessary to develop and enhance their political acumen and their policy-making skills.
- 2.2 Projected enrollment in the proposed course: 15-20 (Cohorts will overlap and students from various interest areas, well as advanced EDAD students, will be the potential enrollees.)
- 2.3 Relationship of the proposed course to courses now offered by the department: The department currently offers EDFN 720 Foundations of Rural Policy. The current course concerns how a rural setting is unique in its operations and decision making. By contrast, the proposed course will address policy and politics more broadly and directly.
- 2.4 Relationship of the proposed course to courses offered in other departments: the other department on campus that offers courses directly related to politics and policy studies is Political Science. Most of Political Science courses relate to general political science or policy governance in federal, state, and local public agencies and government. Similar courses currently offered by the Department of Political Science include: PS 412 Kentucky Government and Politics, PS 211 Introduction to Public Policy, PS 545 Seminar in Public Policy Analysis. These courses would provide strong background and great depth relative to public policy, but they are not directly related to educational policy making. Also, only PS 545 is offered at the graduate level.
- 2.5 Relationship of the proposed course to courses offered in other institutions: Murray offers a somewhat similar course, ADM 657 Educational Policy and Ethics: "Provides a historical overview for the science of institutional policy development in the United States. The relevance, overlap, and interplay of educational policy and ethics at the local, state, and national levels will be explored." Cal State-Fresno offers EdL 203 Governance and Political Perspectives for Educational Leadership: "Determinants of policy in educational organizations and leadership.

Analysis of structures used for legal, fiscal, and political decisions and conflict management. Role of the educational leader in relation to inter-governmental activities aimed at educational reform.” Two courses with similar concepts addressed were found at Eastern Michigan University. The first is EDLD 810 Ethics and Policy Analysis for Educational Leaders: “Designed to equip students with analytical skills for confronting ethical issues in business, education, research, nursing and government. Mastery of the ethical process -- a strategy for making good decisions. Critical thinking about ethical problems in professional settings. Analysis of selected educational and governmental policies from an ethical base using diverse views of professional moral duties as a screening device.” The second course at Eastern Michigan is EDLD 820 The Politics of Educational Leadership: “This course will examine the exercise of political power in education. It is designed for the educational leader who must deal with the impact of politics on managing and leading educational institutions.” Also at Northern Arizona University there is an offering called EDL 723 Publicity and Politics of Education: “Administrator’s responsibilities in maintaining satisfactory public relations, including general policies, organization of school publicity, and agencies for reaching the public.” Missouri State University offers EAD 750 Politics of Education: “Overview of the origins and the nature and impact of political forces surrounding and influencing schools. Students will study the increasingly complex political web of American education as well as research the continuing debate dealing with local control versus the expanding role of state and federal government. This course will help the student in educational administration analyze the various core constituencies of school politics, analyze the issues/demands made in the school community, and study the intervening variables associated with school issues as well as the decisions which must be made by school policy makers.” Youngstown State also offers two courses: EDADM 6933 Educational Policy, Politics, and Change: “Explores who governs America’s schools. Provides an introduction to schools as political systems and the values that shape educational politics and policy making. Examines the role of school leaders as agents of change and alternative change models and strategies.” The second course is similarly called Educational Politics and Policymaking in the United States.

3. Discussion of proposed course:

3.1 Course objectives:

Students will:

- Develop a general awareness of the methods to examine and interpret the “politics” of education in the formal and informal arenas that affect the educational policy system.
- Develop a general awareness of the concepts and contributions of various political models and political processes.
- Analyze and articulate an analysis of the political processes that shape the formulation, enactment, implementation and impact of education policies.
- Develop the “habit of being analytical” in the consideration of the political dimensions of education and in response to current political issues impacting educational settings.
- Become more cognizant of the formal and informal forces that affect educational policy making.
- Acquire an understanding of the role(s) educators play (or might play) in the political and policy-making arenas.

3.2 Content outline:

- Overview of approaches to the study of politics (multiple models and major traditions)
- Framework for political analysis: political systems, power, and influence
- Political processes and policies at the federal level
- Political processes and policies at the state level
- Political processes and policies at the local level
- Understanding and exercising political influence and policy-making in educational leadership.

3.3 Student expectations and requirements: Students will be expected to read a variety of documents and be prepared to analyze and discuss the key concepts and understandings. Students will be given the opportunity to apply, analyze, critique, and produce materials relative to the political processes and

educational policies. Students may be required to write papers, give oral or video presentations, or other activities.

3.4 Tentative texts and course materials:

Grindle, M S. (2004). *Despite the odds: The contentious politics of education reform*. Princeton: University Press.

Instructor collected articles and/or websites relevant to policy and politics.

4. Resources:

4.1 Library resources: Adequate

4.2 Computer resources: Adequate

5. Budget implications:

5.1 Proposed method of staffing: Existing resources

5.2 Special equipment needed: None

5.3 Expendable materials needed: None

5.4 Laboratory materials needed: None

6. Proposed term for implementation: Spring 08

7. Dates of prior committee approvals:

Department of EALR 1/10/07

CEBS Curriculum Committee _____

Professional Education Council _____

Graduate Council _____

University Senate _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

Bibliography
Policy & Politics

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College of Education and Behavioral Sciences
Department of Educational Administration, Leadership and Research
Proposal to Create a New Course
(Action Item)

Contact Person: Jeanne Fiene, Jeanne.fiene@wku.edu, 745-2942

1. Identification of proposed course:

Course prefix (subject area) and number: EDAD 708

- 1.1 Course title: Administration of Fiscal Resources in Districts and Systems
- 1.2 Abbreviated course title: District Resources and Systems
- 1.3 Credit hours and contact hours: 3
- 1.4 Type of course: Lecture
- 1.5 Prerequisites: EDLD 700 or district-level leadership experience
- 1.6 Course catalog listing: Ethical concepts of school finance, school business administration, fiscal management, contemporary economic theories, and related procedures, and practices in educational institutions at the district or system levels.

2. Rationale:

- 2.1 Reason for developing the proposed course: Current courses in the educational administrator preparation program are for building-level leadership candidates and thus deal with resource issues via a building-level, limited focus. Based on surveys of graduates via program assessment, anecdotal discussions with area administrators, and professional literature regarding needs of current and future superintendents, the faculty determined that a wider, systemic-focused resource course needed to be added to current offerings. The proposed course is designed to enhance the knowledge and skills of administrators beyond the school level resource issues to the district level. Students who complete this course will have a clearer understanding and broader perspective of the gamut of resources available to a district.
- 2.2 Projected enrollment in the proposed course: 15-20. Each doctoral cohort admits 20 students; the proposed course is for students whose area of focus is P-12 administration.
- 2.3 Relationship of the proposed course to courses now offered by the department: The department currently offers two other resource management courses: EDAD 588 School Business Management, which addresses the fiscal operations of a school building, not the system or district; and EDAD 590 School Personnel, which deals with the human resources of a school. Therefore, neither of the current offerings meets the need for a district- or system-level resource management and planning course.
- 2.4 Relationship of the proposed course to courses offered in other departments: Other departments similarly were found to offer courses that deal with a part of the resources issue but do not provide a systematic and composite perspective relative to resources. For example, BA 560 Contemporary Human Resources Management again deals with the human resources aspect but it does not deal with planning based on philosophy, nor does it encompass the fiscal and facility resources.
- 2.5 Relationship of the proposed course to courses offered in other institutions: Many institutions offer a course similar to the department's current offerings, EDAD 588 School Business Management and EDAD 590 Administration of School Personnel. For example, each of the other state institutions with programs for the certification of administrators offers one or more parallel courses to our current offerings, such as UK EDA 634 Leadership for Human Resources Development, or U of L's PADM 642 Human Resources Management. The same is true for the other regional institutions but again the focus is on school building level and not district or system leadership. The same thing is true at most benchmark institutions, including: Ball State, CalState-Chico, Central Missouri State, Eastern Illinois, Eastern Michigan, Florida Atlantic, Indiana State, Middle Tennessee State, Montclair State, Northern Arizona, Oakland University, Missouri State, Stephen F. Austin, Towson, Northern Iowa, Western

Illinois, and Youngstown State. A collateral issue that is not applicable in Kentucky outside of Jefferson County is that most schools offer a course on collective bargaining.

The proposed course is not common, but there are some similar courses at other institutions. For example, UK offers EDA 627 School Finance and Support Services. U of L offers PADM Public Budgeting and Finance. Ball State offers EDAD 685 Fiscal Management of Educational Agencies. Eastern Michigan also offers EDLD 612 Economics of Public Education. Indiana State focuses on the broader financial picture in ELAF 753 Public School Finance; it is, however, also similar in large measure to the EDAD 588 at WKU. Northern Arizona offers the extended financial planning course in EDL 737 Budget Preparation and Practices. At Missouri State the planning relative to finance is entitled Organizational Management EAD 658. Stephen F. Austin lists AED 634 Finance Resources Development as the extended course. Western Illinois extends the related topic with EDL 505 School Improvement and Organizational Development.

3. Discussion of proposed course:

3.1 Course Objectives:

After completing this course, the student will be able to demonstrate an understanding of:

- school district finance, revenues, and expenditures for discretionary and mandatory issues
- state tax laws and their impact on school districts
- the implementation of various tax options at the state and local school district level and their impact on school resources
- how various state taxes are structured and their relationship to similar structures in other states
- the sources of revenue for school districts to include local, state, and federal sources
- the state mandated local district financial accounting system (MUNIS)
- the district budgeting process and mandated state timelines
- the function and necessity of proper accounting procedures
- the impact of mandated revenues and expenditures on the budgeting process
- the relationships of budget decisions on implementation of school programs (e.g., School and District Improvement Plans)
- the relationship of budgeting and fiscal management and strategic planning
- the various support programs on the impact of delivery of services to students (e.g., transportation, building maintenance, food service, student attendance accounting)
- the facility building process
- the interconnectedness of all the various subsystems that constitute a school system
- the political process in developing school resources
- the ethical issues related to school district finance

3.2 Content Outline:

- Various state laws related to tax structure for local agencies
- Options of taxes for local agencies and their advantages and disadvantages
- How other states finance public schools and relationship to Kentucky schools
- Local, state, and federal sources of revenue such as taxes, grants, entitlements, donations, and reimbursements
- How various revenues can be expended in the school district
- Relationship of the board of education, the superintendent, and the school system to school financing and budgeting
- Structure and function of the state mandated financial accounting system (MUNIS)
- Mandated documents and timelines for the school district budgeting process
- Auditing procedures
- Relationship of the budgeting process and school instructional programs, personnel, and funds for the schools
- Mandated expenditures and discretionary spending by the school district
- How long term and strategic planning impact budgeting process
- Budgeting and support services such as transportation, food service, and building maintenance

- Necessity, function, procedures, and materials related to student attendance accounting as implemented in Kentucky (STI)
- Kentucky Department of Education Facility Planning process to include the local planning committee, district facility plan, new/renovated building process, and impact on educational plan
- Systems planning
- Political process locally and statewide and a school leader's role
- Kentucky Code of Ethics for School Administrators

3.3 Student Expectations and Requirements:

Students will participate in a variety of topical activities and projects that will assess their knowledge and skills related to the function of school finance at the district or system level. Such activities and projects may include, but will not be limited to:

- a. Readings
- b. Interviews
- c. Research based papers
- d. Observations
- e. Group and individual projects
- f. Presentations
- g. Demonstrations, by staff or invited personnel, or by the student
- h. Case studies

3.4 Tentative texts and course materials:

Instructor-created course pack of readings and websites.

King, R. A., Swanson, A. D., & Sweetland, S. R. (2003). *School finance: Achieving high standards with equity and efficiency* (3rd ed.). Boston: Pearson Education, Inc.

4. Resources:

- 4.1 Library resources: Adequate
- 4.2 Computer resources: Adequate

5. Budget implications:

- 5.1 Proposed method of staffing: Current Staff
- 5.2 Special equipment needed: None
- 5.3 Expendable materials needed: None
- 5.4 Laboratory materials needed: None

6. Proposed term for implementation: Spring 2008

7. Dates of prior committee approvals:

**Department of Educational Administration
Leadership and Research**

1/10/07

CEBS Curriculum Committee

Professional Education Council

Graduate Council

University Senate

Bibliography
Acquiring, Managing and Utilizing Resources in Districts and Systems

- Grace, G. (1995) *School Leadership: Beyond Education An Essay in Policy Scholarship*, The Falmer Press.
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KDE School Finance:

<http://www.education.ky.gov/KDE/Administrative+Resources/Finance+and+Funding/School+Finance/default.htm>

American Education Finance Association:

<http://www.aefa.cc/>

ACCESS – The Campaign for Fiscal Equity:

<http://www.accessednetwork.org/>

National Center for Education Statistics:

www.nces.ed.gov/edfin

The SEEK Formula for Funding Kentucky's School Districts:

<http://www.lrc.state.ky.us/lrcpubs/Rr310.pdf>

National Conference of State Legislatures:

http://www.ncsl.org/programs/educ/ed_finance/index.cfm#test

Education Commission of the States:

<http://www.ecs.org/html/IssueSection.asp?issueid=48&s=Selected+Research+%26+Readings>

Prichard Committee for Academic Excellence:

<http://www.prichardcommittee.org/>

College of Education and Behavioral Sciences
Department of Educational Administration, Leadership and Research
Proposal to Create a New Course
(Action Item)

Contact Person: Jeanne Fiene, Jeanne.fiene@wku.edu, 745-2942

1. Identification of proposed course:

Course prefix (subject area) and number: EDAD 710

- 1.1 Course title: School Leadership and Technology Planning for School Improvement
- 1.2 Abbreviated course title: School Leader/Tech Planning
- 1.3 Credit hours and contact hours: 3
- 1.4 Type of course: Lecture and Lab
- 1.5 Prerequisite: Admission to Ed.D. program or district-level administrative experience
- 1.6 Course catalog listing: Use of modern technological tools in instructional and administrative processes; evaluation of hardware and software for both instructional uses and as administrative tools.

2. Rationale:

- 2.1 Reason for developing the proposed course: This course is primarily intended as an elective in The Doctoral Program. The department has been involved for several years with the School Leadership Technology Initiative and as such has embedded the NETS-A standards and requisite skills and applications into courses in the current programs. However, the current offerings are designed to promote personal productivity as enhanced by technology. The proposed course is designed to assist district or organizational leaders with the systematic design, implementation, and evaluation of technology plans and systems. The philosophy, budget, and comprehensive planning related to technological resources will be discussed. Students will be required to consider goals, standards, resources, community structures, and development needs to maximize technological effectiveness. Students will also survey currently available software and hardware.
- 2.2 Projected enrollment in the proposed course: 15-20. Each doctoral cohort will include 20 students; the proposed course is intended primarily for students whose focus area is P-12 administration.
- 2.3 Relationship of the proposed course to courses now offered by the department: The department currently offers no courses related specifically to technology planning. However, the utilization of technology is embedded in every course. This course will extend the knowledge of planning processes and behaviors learned through EDAD 688 Planning for School Improvement, a course offered in the master's program for building-level leaders. Furthermore, students who have taken or who may take other elective courses in technology applications will find the proposed course useful in defining and developing clear plans for the implementation and evaluation of technology in their schools and districts.
- 2.4 Relationship of the proposed course to courses offered in other departments: There are other technology-relevant courses in other departments, but they are more about application and not as focused on planning and leading with technology. Three examples are: LME 535 Survey of Educational Technology Practices, LME 545 Principles of Educational Technology Applications, and SEC 445G Introduction to Educational Technology. The proposed course is designed to help students survey available products and systems and to plan how to maximize the integration of technology into classrooms, schools, and districts in the most efficient and effective manner. The proposed course is not designed specifically to survey practices or applications but rather to serve as a planning course to use the data and available resources to more fully plan for technology use and integration throughout instructional and administrative responsibilities in the district.

- 2.5 Relationship of the proposed course to courses offered in other institutions: UK offers EDA 642 Microcomputer Applications in Administration. NKU offers some technology relevant courses, including EDG 602 Technology in Education; TTE 641 Distance Learning Design and Methodology; TTE 620 Instructional Technology; and one close match, EDA 624 Technology and Best Practices for School Improvement. EKU offers EAD 824 Technology and Leadership Practices for Program Improvement. Morehead offers EDIL 619 Technology and Best Practices for Program Improvement. EDLD 518 Multimedia Technology for School Administrators is a similar course at Eastern Michigan. Florida Atlantic offers EME 6426 Administrative Applications of Educational Technology. At Middle Tennessee State the comparable course is SPSE 6600 Microcomputers in Educational Administration. Montclair State has more than one technology-related course, but EDTC 510 Technology Planning for Educational Renewal is the most similar to the proposed course. Similarly, at Northern Arizona the similar course is EDL 732 Educational Leadership and Planning for Technology. Towson offers ISTC 702 Educational Leadership and Technology. Western Illinois' parallel course is Administrative Applications of Education Technology. Youngstown has a course entitled EDADM 7026 Technology and Facilities for Learning Organizations.

3. Discussion of proposed course:

3.1 Course objectives:

- Students will develop an inspired, shared vision for the comprehensive integration of technology.
- Students will demonstrate a system for measuring the environment and culture relative to the realization of that vision.
- Students will create a management system to ensure and document that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.
- Students will model, apply, and document their use of technology to enhance their professional practice and to increase their own productivity and that of others.
- Students will create a documentation system to measure the integration of technology to support productive systems for learning and administration.
- Students will document the level to which the district educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.
- Students will understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.

3.2 Content outline:

- Collaborative development of vision and plans for technology
- Integration of plans to leverage resources
- Identification, implementation, evaluation, and promotion of appropriate technologies to enhance and support instruction
- Technologically-enhanced learner-centered environments
- Use of technology to assess, evaluate, and manage administrative and operational systems
- Emerging technologies and their potential uses in education
- Technology for communication and collaboration
- Use of appropriate software and databases
- Use of data in making leadership decisions
- Legal, moral, and ethical issues surrounding the use of technologies
- Acceptable use policies, copyright and confidentiality issues
- Student discipline for misuse of technology
- Network and data security
- Physical safety of students, employees, and facilities

3.3 Student expectations and requirements: Students will complete a variety of activities and projects that will prepare them with the knowledge and skills to conduct a school planning process and create a school planning document that may include but not limited too the following components:

- A technology needs assessment for a school district,

- Facilitation and documentation of multi-stakeholder planning meetings or written analysis and review of meeting minutes and agendas,
- A written critique of any existing plans,
- A written prepared plan and budget for purchase, implementation and evaluation of the required hardware, software and supports
- A document which links plans to Comprehensive School Improvement Plans and School/District report cards
- A document that creates or evaluates policies and guidelines for technology usage
- Evidence of a presentation demonstrating and documenting how the plan and budget fit the district philosophy, budget, needs and abilities.

3.4 Tentative texts and course materials:

Supovitz, J.A., & Klein, V. (2003, November). *Mapping a course for improved student learning: How innovative schools systematically use student performance data to guide improvement*; Available from Consortium for Policy Research in Education at www.cpre.org/Publications/AC-08pdf.

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IBM. (2002). *Change toolkit reinventing education*. org

4. Resources:

- 4.1 Library resources: Adequate
- 4.2 Computer resources: Adequate

5. Budget implications:

- 5.1 Proposed method of staffing: Current Faculty
- 5.2 Special equipment needed: None
- 5.3 Expendable materials needed: None
- 5.4 Laboratory materials needed: None

6. Proposed term for implementation: Spring, 2008

7. Dates of prior committee approvals:

Department of Educational Administration, Leadership, and Research	<u>1/10/07</u>
CEBS Curriculum Committee	_____
Professional Education Council	_____
Graduate Council	_____
University Senate	_____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

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**College of Education and Behavioral Sciences
Department of Special Instructional Programs
Proposal to Suspend a Course
(Consent Item)**

Contact Person: Janice Ferguson janice.ferguson@wku.edu 745-6123

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EXED 417G
- 1.2 Course title: Assessment and Curriculum I for Students with Moderate and Severe Disabilities
- 1.3 Credit hours: 3

2. Rationale for the course suspension: This course was part of the old Planned Fifth Year Rank II. Graduate students are currently admitted to an MAE in EXED.

3. Effect of course suspension on programs or other departments, if known:
No effect is anticipated. Only EXED majors took this course.

4. Proposed term for implementation: Spring, 2009

5. Dates of prior committee approvals:

Department/Division: 11/7/08

CEBS Curriculum Committee _____

Professional Education Council _____

Graduate Council _____

University Senate _____

Attachment: Course Inventory Form

**College of Education and Behavioral Sciences
Department of Special Instructional Programs
Proposal to Suspend a Course
(Consent Item)**

Contact Person: Janice Ferguson janice.ferguson@wku.edu 745-6123

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EXED 418G
- 1.2 Course title: Assessment and Curriculum II for Students with Moderate and Severe Disabilities
- 1.3 Credit hours: 3

2. Rationale for the course suspension: This course was part of the old Planned Fifth Year Rank II. Graduate students are currently admitted to an MAE in EXED.

3. Effect of course suspension on programs or other departments, if known:
No effect is anticipated. Only EXED majors took this course.

4. Proposed term for implementation: Spring, 2009

5. Dates of prior committee approvals:

Department/Division: 11/7/08

CEBS Curriculum Committee _____

Professional Education Council _____

Graduate Council _____

University Senate _____

Attachment: Course Inventory Form

**College of Education and Behavioral Sciences
Department of Special Instructional Programs
Proposal to Delete a Course
(Consent Item)**

Contact Person: Janice Ferguson janice.ferguson@wku.edu 745-6123

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EXED 491
- 1.2 Course title: Lecture in Lieu of Student Teaching
- 1.3 Credit hours: 4

2. Rationale for the course deletion: EXED 491 has not been taught in several years, and there are no plans to teach it again in the future.

3. Effect of course deletion on programs or other departments, if known:
No effect is anticipated. Only EXED majors took this course.

4. Proposed term for implementation: Spring 2009

5. Dates of prior committee approvals:

Department/Division:	_____ 11/7/08 _____
CEBS Curriculum Committee	_____
Professional Education Council	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Attachment: Course Inventory Form

**College of Education & Behavioral Science
Department of Special Instructional Programs
Proposal to Revise Course Title
(Consent Item)**

Contact Person: Nedra Atwell, Nedra.atwell@wku.edu 745-4647

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EXED 518
- 1.2 Current course title: Seminar: Contemporary Issues in Special Education
- 1.3 Credit hours: 3 hours

2. Proposed course title:

Issues in Behavior Management

3. Proposed abbreviated course title:

Issues in Behavior Management

4. Rationale for the revision of course title:

The new title reflects the current major issue in the field of exceptional education and thus is more descriptive of the focus of the course.

5. Proposed term for implementation: Fall semester, 2009

6. Dates of prior committee approvals:

Department of Special Instructional Programs _____ 11/7/08

CEBS Curriculum Committee _____

Professional Education Council _____

Graduate Council _____

University Senate _____

Attachment: Course Inventory Form

**College of Education & Behavioral Science
Department of Special Instructional Programs
Proposal to Revise Course Title
(Consent Item)**

Contact Person: Marty Boman, marty.boman@wku.edu 5-8833

1. Identification of course:

- 1.1 Current course prefix (subject area) and number: EXED 535
- 1.2 Current course title: Curriculum for Moderate Retarded
- 1.3 Credit hours: 3 hours

2. Proposed course title:

Curriculum for Individuals with Moderate and Severe Disabilities

3. Proposed abbreviated course title:

Curriculum for Mod/Sev Dis

4. Rationale for the revision of course title:

Referring to any individual as retarded is incorrect. The proposed change uses correct terminology.

5. Proposed term for implementation: Fall semester, 2009

6. Dates of prior committee approvals:

Department of Special Instructional Programs 11/7/08

CEBS Curriculum Committee _____

Professional Education Council _____

Graduate Council _____

University Senate _____

Attachment: Course Inventory Form

College of Education and Behavioral Sciences
Department of Curriculum and Instruction
Proposal to Create a New Course
(Action Item)

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, (270) 745-6203

1. Identification of proposed course:

- 1.1 Course prefix and number: SMED 340
- 1.2 Course title: Perspectives on Mathematics and Science
- 1.3 Abbreviated course title: Perspectives on Math & Science
- 1.4 Credit hours and contact hours: 3.0
- 1.5 Type of course: C (lecture/lab)
- 1.6 Prerequisite: SMED 210
- 1.7 Course catalog listing:
Introduction to the historical, social, and philosophical implications of math and science through investigations of pivotal experiments and findings. Includes integrated laboratory experiences that replicate significant discoveries.

2. Rationale:

- 2.1 Reason for developing the proposed course:
This course is part of SKyTeach, a National Math and Science Initiative (NMSI) funded program to replicate the University of Texas at Austin's UTeach curriculum for preparation of math and science teachers. Adopting this sequence meets NMSI's requirement for replication of UTeach at WKU. In this SKyTeach course, students will explore different ways that humans have explained the workings of the natural world. This course has interlocking goals: to present an overview of the history and philosophy of mathematics and science; to broaden comprehension of all subjects taught in middle and secondary grades and enable math/science teachers to put this broader history and context to work; and to improve research and information analysis skills.
- 2.2 Projected enrollment in the proposed course:
Based on enrollments in current math and science teacher education sequences and the successful recruitment of math/science majors for the one-time-only Fall 2008 sections of SMED 101, 60 students per year are expected to enroll.
- 2.3 Relationship of the proposed course to courses now offered by the department:
The current teacher preparation program has no comparable course. The introduction of this course to the math and science teacher preparations sequence will explicitly address the national and Kentucky science standards regarding the history and nature of science.
- 2.4 Relationship of the proposed course to courses offered in other departments:
This course has overlapping content with HIST 119/120, MATH 409 and the suspended PHIL 330, but emphasizes specific case studies and integration of an interdisciplinary approach into teaching. A letter of support for this proposal was provided by the Department of Philosophy & Religion in April 2008. The Department of History reviewed this proposal at a faculty meeting in August 2008. The Potter College Curriculum Committee discussed this proposal as an information-only item during its September 2008 meeting.

2.5 Relationship of the proposed course to courses offered in other institutions:
 This course is a replication of the *Perspective on Mathematics and Science* course in the University of Texas at Austin’s UTeach program.

3. Discussion of proposed course:

3.1 Course objectives:

A student who successfully completes this course will be able to:
 provide, through detailed case studies of major events, an overview of the history of science and math to better prepare math/science teachers to comprehend their field;
 put historical and philosophical perspectives and context to work in pedagogy; and
 improve research and information analysis skills.
 Some of the readings will be from primary sources, others will be from secondary texts.

3.2 Content outline:

Topics in math and science, such as:

- What is science anyway? What is discovery? What is proof?
- Using mathematics to describe nature
- Pythagorean mystics, the irrational, and Plato’s philosophy of math
- Laws of math: fundamental rules of algebra
- Controversies in the history of negative and imaginary numbers
- Copernicus, Kepler, Galileo’s observations and the conflict with the Church
- J.J. Thomson, the discovery of the electron, and the nature of discovery

How the scientific method deals with contradictions and controversy, such as:

- Infinitesimally small contradictions in the calculus
- Alchemy, elements, and the philosopher’s stone
- Darwin’s explorations, controversies over evolution, how to discuss it in school
- Continents in motion, Wegener versus everyone else
- Einstein and the relativity of space and time
- Big science – the atomic bomb or the Human Genome Project
- Making new things – organic chemistry, cloning, and Frankenstein’s monster
- Human nature – improving people, eugenics, and the bumps on your head

Diversity and Multicultural Themes in Mathematics and Science, such as:

- Contributions to Mathematics and Science by women and minorities
- Contributions to Mathematics and Science by cultures other than European cultures

Developing thematic lessons, such as:

- Deep time and the age of the earth
- Species, hybrids, and monsters
- Accidental science and the prepared mind: X-rays, penicillin, Velcro, and nylon

3.3 Student expectations and requirements:

Students will be able to:	Evidence (Student Products)
1. Develop an overview of the progression of mathematics and science	<ul style="list-style-type: none"> • Quizzes • Weekly reflective writing assignments • Research papers
2. Examine the underpinnings of	<ul style="list-style-type: none"> • Quizzes

Students will be able to:	Evidence (Student Products)
modern science and mathematics by analyzing the contributions of key individuals	<ul style="list-style-type: none"> • Research papers • Project reports • Research and reporting on the contributions of women, minorities, and other cultures other to the development of mathematics and science
3. Develop skills in searching for, retrieving, and evaluating the provenance and reliability of source materials	<ul style="list-style-type: none"> • Research-skills quiz • Annotated bibliographies
4. Integrate approaches and material learned in the course with independent research and science or math content to design middle and high school math/science lessons	<ul style="list-style-type: none"> • 5-E lesson plan designed for middle or high school students that addresses standards, and integrates approaches and material learned in the course with math/science content • Feedback for 5-E lessons taught to peers • Project reports
5. Replicate pivotal experiments, techniques, and findings	<ul style="list-style-type: none"> • Active participation in class discussions • Project reports

3.4 Tentative texts and course materials:
 Course packet of selected readings, prepared by the instructor

4. Resources:

- 4.1 Library resources: See attached library resource form and bibliography
- 4.2 Computer resources: No new resources required

5. Budget implications:

- 5.1 Proposed method of staffing: Current faculty
- 5.2 Special equipment needed: None
- 5.3 Expendable materials needed: None
- 5.4 Laboratory materials needed: None

6. Proposed term for implementation: Fall 2009

7. Dates of prior committee approvals:

Department of Curriculum & Instruction: 25 April 2008

CEBS Curriculum Committee: _____

Professional Education Council: _____

University Curriculum Committee: _____

General Education Committee: _____

University Senate: _____

College of Education and Behavioral Sciences
Department of Curriculum and Instruction
Proposal to Create a New Course
(Action Item)

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, (270) 745-6203

1. Identification of proposed course:

- 1.1 Course prefix and number: SMED 360
- 1.2 Course title: Research Methods for Math and Science Teachers
- 1.3 Abbreviated course title: Research Methods
- 1.4 Credit hours and contact hours: 3.0
- 1.5 Type of course: B (lab)
- 1.6 Prerequisite: SMED 210
- 1.7 Course catalog listing:

Laboratory-based introduction to the tools and techniques used by scientists and mathematicians to further an understanding of the natural world and application of this knowledge to math and science education. Students will design and carry out laboratory investigations, and present written and oral reports of the results.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is part of SKyTeach, a National Math and Science Initiative (NMSI) funded program to replicate the University of Texas at Austin's UTeach curriculum for preparation of math and science teachers. Adopting this sequence meets NMSI's requirement for replication of UTeach at WKU. The purpose of this course is to present SKyTeach students with the tools used to solve mathematical and scientific problems. Through performing their own investigations, future math and science teachers will become familiar with the processes by which investigators develop the knowledge and insights that are eventually taught in conventional mathematics and science classes.

- 2.2 Projected enrollment in the proposed course:

Based on enrollments in current math and science teacher education sequences and the successful recruitment of math/science majors for the one-time-only Fall 2008 sections of SMED 101, 60 students per year are expected to enroll.

- 2.3 Relationship of the proposed course to courses now offered by the department:

The current teacher preparation program has no comparable course. The introduction of this course to the math and science teacher preparations sequence will explicitly address the national and Kentucky science standards regarding scientific ways of thinking and working. The pre-service teachers will take part in original science and mathematics research projects presented in the context of how grade school students would be able to use such investigations to learn more about and increase their appreciation for research.

- 2.4 Relationship of the proposed course to courses offered in other departments:

This research-based lab course is more structured than the 399 "Independent Research" or senior project courses offered by departments in Ogden College.

- 2.5 Relationship of the proposed course to courses offered in other institutions:

This course is a replication of the *Research Methods* course in the University of Texas at Austin's UTeach program.

3. Discussion of proposed course:

3.1 Course objectives:

The goal of this lab-based course is to provide future teachers with an opportunity to design and carry out a number of brief math or science inquiries and an additional extended research project. Students will acquire and apply the skills used by professional researchers as they carry out scientific inquiries.

3.2 Content outline:

Hypothesis driven research, hypotheses testing
 Use of experiments to answer scientific questions
 Use of computer based data acquisition and analysis tools
 Mathematical modeling of scientific phenomena
 Design of experiments to reduce systematic and random errors
 Use of statistics to interpret experimental results and deal with sampling errors
 Laboratory safety and ethical treatment of human subjects
 Finding and reading articles in the current scientific literature
 Presenting scientific information: plotting, writing, research talks, publishing
 Applying scientific arguments in matters of social importance

3.3 Student expectations and requirements:

Students will be able to:	Evidence (Student Products)
1. Use experiments to answer scientific questions.	four research inquiries on separate topics designed and carried out by student: <ol style="list-style-type: none"> 1. brief home inquiry 2. inquiry using high school lab equipment 3. survey involving human subjects 4. extended laboratory inquiry
2. Use computer based data acquisition and analysis tools	<ul style="list-style-type: none"> • inquiry 2 and 4
3. Model scientific phenomena mathematically.	<ul style="list-style-type: none"> • homework assignments • Personalized modeling assignments as part of inquiries 2 and 4
4. Design experiments to reduce systematic and random errors.	<ul style="list-style-type: none"> • Papers on inquiries 2, 3, and 4 • Proposals for inquiries 2 and 4
5. Use statistics to interpret experimental results and deal with sampling errors.	<ul style="list-style-type: none"> • homework assignments • brief in-class papers • write-ups for inquiries 2, 3, and 4
6. Practice ethical treatment of human subjects.	<ul style="list-style-type: none"> • certificate demonstrating completion of human subjects training • satisfactory completion of inquiry 3 which involves human subjects
7. Apply safe laboratory procedures.	<ul style="list-style-type: none"> • instructor observations during labs
8. Find and read articles in the current scientific literature.	<ul style="list-style-type: none"> • homework assignments • performance assessed during debate
9. Apply scientific arguments in	<ul style="list-style-type: none"> • debates carried out in class in teams at end

matters of social importance.	of semester
10. Write scientific papers.	<ul style="list-style-type: none"> • four written lab reports
11. Review scientific papers.	<ul style="list-style-type: none"> • inquiries 2 and 4 require students to evaluate each other in pairs and turn in their evaluations as homework assignment
12. Orally present scientific work.	<ul style="list-style-type: none"> • oral report on inquiries 2 and 4 • debate presentation

3.4 Tentative texts and course materials:

Course packet of selected readings, prepared by the instructor

4. Resources:

Library resources: see attached library resource form and bibliography

Computer resources: no new additional resources required

5. Budget implications:

5.1 Proposed method of staffing:

current faculty from the departments of Biology, Chemistry, Geography & Geology, and Physics & Astronomy

5.2 Special equipment needed: none

5.3 Expendable materials needed: initially funded through SKyTeach

5.4 Laboratory materials needed: initially funded through SKyTeach

6. Proposed term for implementation: Spring 2010

7. Dates of prior committee approvals:

Department of Curriculum & Instruction: 25 April 2008

CEBS Curriculum Committee: _____

Professional Education Council: _____

University Curriculum Committee: _____

University Senate: _____

College of Education and Behavioral Sciences
Department of Curriculum and Instruction
Proposal to Create a New Course
(Action Item)

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, (270) 745-6203

1. Identification of proposed course:

- 1.1 Course prefix and number: SMED 470
- 1.2 Course title: Project-Based Instruction
- 1.3 Abbreviated course title: Project-Based Instruction
- 1.4 Credit hours and contact hours: 3.0
- 1.5 Type of course: A (applied learning)
- 1.6 Prerequisite: SMED 320
- 1.7 Course catalog listing:
Methods, techniques, and technologies used to implement and assess problem-based investigations in math and science classrooms. Fieldwork required; students are responsible for arranging their own transportation to sites.

2. Rationale:

- 2.1 Reason for developing the proposed course:
This course is part of SKyTeach, a National Math and Science Initiative (NMSI) funded program to replicate the University of Texas at Austin's UTeach curriculum for preparation of math and science teachers. Adopting this sequence meets NMSI's requirement for replication of UTeach at WKU. Project-based instruction engages learners in exploring authentic, important, and meaningful questions of real concern to students. Through a dynamic process of investigation and collaboration, and using the same processes and technologies that real scientists use, students in the proposed course will work in teams to formulate questions, make predictions, design investigations, collect and analyze data, make products, and share ideas. Pre-service teachers will learn fundamental science and math principles that apply to their students' daily lives.
- 2.2 Projected enrollment in the proposed course:
Based on enrollments in current math and science teacher education sequence and the successful recruitment of math/science majors for the one-time-only fall 2008 sections of SMED 101, 60 students per year are expected to enroll.
- 2.3 Relationship of the proposed course to courses now offered by the department:
This course will combine aspects of SEC 351, SEC 352, MGE 385, MGE 485, MGE/SEC 477, and MGE/SEC 479.
- 2.4 Relationship of the proposed course to courses offered in other departments:
No other department offers a similar introduction to math and science education for middle grade and secondary teachers.
- 2.5 Relationship of the proposed course to courses offered in other institutions:
This course is a replication of the *Project-Based Instruction* course in the University of Texas at Austin's UTeach program.

3. Discussion of proposed course:

3.1 Course objectives:

The student who is successful in this course will: understand the theoretical implications of project-based instruction; achieve competency with important learning technologies; be able to practically apply project-based instruction within a classroom setting; and establish successful project-based learning environments in a field research setting.

Students will integrate appropriate items within their project-based lessons to demonstrate an awareness of and plan appropriately for the needs of diverse learners and multicultural awareness and settings in middle school and secondary classrooms.

Students will be presented with a theory-driven perspective accounting for what is understood about how people learn and how project-based instruction may be the best choice for bridging the gap between theory and practice. The technological and practical components will assist students in developing project-based units. The field experiences involve both observation of well-implemented project-based instruction in local schools and implementation of project-based instruction with students on extended study trips, such as to Mammoth Cave National Park or the Green River Biological Preserve.

3.2 Content outline:

Theoretical Implications

Importance of Project-Based Instruction (PBI) in terms of students' cognitive development, equity, and motivation.

Applications of educational theory as it relates to classroom practice in the area of project-based instruction.

Distinction between project-based and other instructional approaches and decide which approach best fits instructional goals.

Usefulness of technology in achieving learning objectives and select appropriate resources for student use.

Examples of project-based instruction in math or science and analyze those in terms of Krajcik's, Boaler's and Polman's models for PBI.

Ways in which students with varying ability levels and students from different cultural backgrounds learn optimally.

Importance of cultural awareness and sensitivity in planning, organizing, and teaching with Project Based Instruction.

Technological Competencies

Technology to develop projects (e.g., concept mapping software, video editing software)

Integrate relevant technology into curricular units (e.g., Internet, simulations, data analysis packages, modeling software, etc.)

Practical Application

Use design principals to develop interdisciplinary, two to three-week project-based units for high school classes.

Develop alternative assessments appropriate for project-based instruction.

Discuss lab safety and liability issues related to project based instruction and lab or field environments (OSHA regs, material data sheets, safe disposal, etc.).

Modifications for diverse learners

Field Experiences

Use inquiry methods with students in a project-based setting.

Compare and contrast observations of "real" project-based classrooms with those presented in readings and with theoretical models.

Demonstrate skill in setting up and managing wet lab and field project-based environments including set up, safety, and assessment.

3.3 Student expectations and requirements:

Students will be able to:	Evidence (Student Products)
1. Discuss the importance of project-based instruction in terms of students' cognitive development, equity, and motivation.	<ul style="list-style-type: none"> • project-based unit includes rationale & objectives • proposal to implement a project-based unit includes a rationale and potential impact
2. Reflect on applications of educational theory as it relates to classroom practice in the area of inquiry-based instruction.	<ul style="list-style-type: none"> • grant proposal to implement inquiry-based unit includes a rationale and potential impact
3. Distinguish among project-based and other instructional approaches and decide which approach best fits instructional goals based on benefits and limitations of each.	<ul style="list-style-type: none"> • project-based unit that includes benchmark lessons and an appropriate lesson sequence based on the best fit of different instructional approaches
4. Discuss the ways in which students with varying ability levels and students from different cultural backgrounds learn optimally.	<ul style="list-style-type: none"> • project-based unit includes methods for students with varying levels of ability • project-based unit includes methods for students with different learning styles
5. Reflect on the importance of cultural awareness and sensitivity in planning, organizing, and teaching with Project Based Instruction.	<ul style="list-style-type: none"> • reading assignments and class discussions related to multiple intelligences, gifted students, learning styles, and cultural differences among students
6. Evaluate the usefulness of various technologies in achieving learning objectives.	<ul style="list-style-type: none"> • annotated list of relevant resources and technological tools for a project-based unit • presentation utilizing technology
7. Compare and contrast observations of "real" project-based classrooms with those presented in readings and with theoretical models.	<ul style="list-style-type: none"> • on-line discussions of class readings and field observations of project-based classes
8. Critically analyze a lesson that they have taught, and revise and re-teach it.	<ul style="list-style-type: none"> • mini-lesson study includes lesson plans; video of two lessons; reflections on planning, how the lesson went each time it was taught, and rationale for the changes.
9. Demonstrate skill in setting up and managing wet lab and field project-based environments.	<ul style="list-style-type: none"> • assessment of video showing the student setting up and managing a wet lab and field project-based environments.
10. Work collaboratively to design a four- to six-week project-based unit for math and/or science courses.	<ul style="list-style-type: none"> • project-based unit includes a calendar, rationale, objectives, theoretical basis for project, benchmark lessons, investigations, alternative assessment strategies, related resources, and technological tools
11. Design and teach lessons with	<ul style="list-style-type: none"> • project-based unit that includes adaptations

Students will be able to:	Evidence (Student Products)
adaptations for diverse learners.	for diverse learners <ul style="list-style-type: none"> • assessment of video of two lessons
12. Read and discuss safety standards (e.g. materials safety data sheets, OSHA regulations, how to dispose of chemicals safely, etc.)	<ul style="list-style-type: none"> • participation in class discussion on safety and liability issues • project-based unit includes safety precautions

3.4 Tentative texts and course materials:

J.S. Krajcik, C.M. Czerniak and C. Berger. 1998. *Teaching Children Science: A Project-Based Approach*. McGraw-Hill Companies

J. Boaler. 2002. *Experiencing School Mathematics: Traditional and Reform Approaches to Teaching and Their Impact on Student Learning*. Lawrence Erlbaum Associates

J.L. Polman. 2000. *Designing Project-Based Science. Connecting Learners through Guided Inquiry*. Teachers College Press, Columbia University

Gutstein, E. and B. Peterson. 2006. *Rethinking Mathematics: Teaching Social Justice by the Numbers*. Rethinking Schools, Ltd.

Bazin, M., M. Tamez, and the Exploratorium Teacher Institute. 2002. *Math and Science Across Cultures*. The Exploratorium

4. Resources:

4.1 Library resources: Library resource form and bibliography available upon request

4.2 Computer resources: No new additional resources required

5. Budget implications:

5.1 Proposed method of staffing: Current faculty

5.2 Special equipment needed: None

5.3 Expendable materials needed: Initially funded through SKyTeach

5.4 Laboratory materials needed: Initially funded through SKyTeach

6. Proposed term for implementation: Spring 2010

7. Dates of prior committee approvals:

Department of Curriculum & Instruction: 25 April 2008

CEBS Curriculum Committee: _____

Professional Education Council: _____

University Curriculum Committee: _____

University Senate: _____

College of Education and Behavioral Sciences
Department of Curriculum and Instruction
Proposal to Create a New Course
(Action Item)

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, (270) 745-6203
Vicki H. Metzgar, vicki.metzgar@wku.edu, (270) 745-3343

1. Identification of proposed course:

- 1.1 Course prefix and number: SMED 489
- 1.2 Course title: SMED Student Teaching Seminar
- 1.3 Abbreviated course title: SMED Student Teaching Seminar
- 1.4 Credit hours and contact hours: 3.0
- 1.5 Type of course: A (applied learning)
- 1.6 Co requisite: MGE 490 or SEC 490
- Prerequisite: Approved for admission to student teaching.

1.7 Course catalog listing:

Provides a bridge between the theory and practice of math and science teaching. Methods, techniques, technologies and issues pertinent to math and science instruction in middle grade and secondary classrooms. Field experiences in public schools and/or other appropriate settings away from campus are required. Pre-Service Teachers are responsible for their own transportation to designated or assigned sites.

2. Rationale:

2.1 Reason for developing the proposed course:

The SMED program is part of the larger SKyTeach initiative at Western Kentucky University, which has as its purpose the recruitment, preparation, and certification of increased numbers of mathematics and science teachers. This initiative, which grows out of the replication of the UTeach program at the University of Texas at Austin, will provide SMED students with a sequence of coursework, including student teaching and the seminar for student teachers, that is a pathway toward a major in Curriculum and Instruction, as well as a major in either mathematics or science content. The SMED major will enable students to acquire certification to teach in the State of Kentucky. This course will replace EDU 489 (presently required for all students enrolled in student teaching) for students seeking certification to teach mathematics and science, and it will meet all the requirements of EDU 489. Because SMED students in the SKyTeach cohort will take this class together, it will be more likely that SKyTeach students will complete the requirements of both majors and their entire program of studies.

2.2 Projected enrollment in the proposed course:

Based on enrollments in the current math and science teacher education sequence and the successful recruitment of math/science majors for the one-time-only Fall 2008 sections of SMED 101, at least 60 students per year are expected to enroll in entry-level SMED courses. Corresponding courses in the final semesters will experience similar growth in enrollment. When the SMED program is approved, it will become the sole path to math/science teacher certification for middle or high school mathematics and science.

- 2.3 Relationship of the proposed course to courses now offered by the department:
This course will differ from EDU 489 only to take advantage of the extensive, individualized, and on-going coaching the student teachers will have received through the previous SMED courses.
- 2.4 Relationship of the proposed course to courses offered in other departments:
No other department offers a similar introduction to math and science education for middle grade and secondary teachers. The proposed course is part of the capstone experience (including student teaching) for teacher candidates, and in that sense it is similar to capstone courses offered in many other programs across the university.
- 2.5 Relationship of the proposed course to courses offered in other institutions:
This course is a replication of the student teaching seminar course in the University of Texas at Austin's UTeach program.

3. Discussion of proposed course:

3.1 Course objectives:

The student who is successful in this course will:

- understand the theoretical implications of project-based instruction;
- achieve competency with important learning technologies;
- be able to practically apply project-based instruction within a classroom setting; and
- establish successful project-based learning environments in a field research setting.

3.2 Content outline:

SMED 489 will closely parallel the content of the current EDU 489 Student Teaching Seminar. As such, the content will include:

- Factors that influence student learning
- Situational leadership
- Mastery learning strategies
- Broad-based and Content-specific themes in teaching
- Lesson content and organization
- Differentiation of instruction for students with special needs
- Analysis of data
- Pre-assessment, formative assessment, and summative assessment
- Developing student creativity, problem-solving skills, and critical thinking skills
- Behavior management
- Moral, ethical, and legal issues in classrooms and school settings
- Certification and employment issues in education
- Completion of the capstone Teacher Work Sample project

3.3 Student expectations and requirements:

Students will be able to:	Evidence (Student Products)
<p>1. Design instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessments</p>	<ul style="list-style-type: none"> • Teacher Work Sample (TWS)- Contextual Factors, Learning Goals, Assessment Plan, Design for Instruction, Sample assessments and student artifacts • Seminar Reflections, Assessment Artifacts
<p>2. Create a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence.</p>	<ul style="list-style-type: none"> • TWS- Contextual factors, Instructional Design, Instructional Decision Making • Written classroom rules and procedures • Seminar Reflections
<p>3. Promote student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely high-quality feedback</p>	<ul style="list-style-type: none"> • TWS- Design for Instruction, Instructional Decision Making , Analysis of learning. Reflection • Seminar Reflections, Sample Assessment
<p>4. Fulfill professional roles and responsibilities and adhere to legal and ethical requirements of the profession.</p>	<ul style="list-style-type: none"> • Participation in campus professional development days • Seminar Reflections, Resume Submissions, Job fair Reports

3.4 Tentative texts and course materials: There are no texts required for this course.

4. Resources:

4.1 Library resources: see attached library resource form and bibliography

4.2 Computer resources: no additional resources required

5. Budget implications:

5.1 Proposed method of staffing: current staff

5.2 Special equipment needed: none

5.3 Expendable materials needed: initially funded through SKyTeach

5.4 Laboratory materials needed: initially funded through SKyTeach

6. Proposed term for implementation: Fall 2010

7. Dates of prior committee approvals:

Department of Curriculum & Instruction: _____

CEBS Curriculum Committee: _____

Professional Education Council: _____

Undergraduate Curriculum Committee: _____

University Senate: _____

Attachment: Bibliography, Library Resources Form, Course Inventory Form

SMED 489: *Student Teaching Seminar*

Books in WKU Libraries collection – representative list of supplemental materials

Teaching Children Science: A Project-Based Approach, J.S. Krajcik, C.M. Czerniak and C. Berger, 1998, McGraw-Hill Companies

Experiencing School Mathematics: Traditional and Reform Approaches to Teaching and Their Impact on Student Learning, J. Boaler, 2002, Lawrence Erlbaum Associates

Designing Project-Based Science. Connecting Learners through Guided Inquiry, J.L. Polman, 2000, Teachers College Press, Columbia University

Classroom Management: Creating Positive Outcomes for All Students, Bloom, L.A., 2009, Pearson Education Inc,

Journals in WKU Libraries collection – representative list of supplemental materials

Journal of Research in Science Teaching

Mathematics Teacher

Mathematics Teaching in the Middle School

Physics Teacher

Science and Children

Science Education

Science Scope

Science Teacher

Teaching Children Mathematics

LIBRARY RESOURCES

Date: October 10, 2008

Proposed Course Name and Number: SMED 489: Student Teaching Seminar

Current Library holdings in support of the described course are:

_____ adequate _____ inadequate*
* Additional materials that would raise support to an adequate level:

Monographs or Nonprint Resources:

(Note: put any additional recommended titles on reverse side)

Serials to be recommended for adoption:

Comments:

Vicki Metzgar, Faculty Member Proposing Course

Liaison Librarian

Coordinator, Collection Development

A tentative course proposal including bibliography must be submitted to the appropriate Subject Reference Librarian at least three weeks prior to the departmental curriculum committee meeting when the proposal will be considered. The availability of Library Resources Statement will be completed and returned to the course proposer.

**College of Education and Behavioral Sciences
Department of Curriculum and Instruction
Proposal to Create a New Major Program
(Action Item)**

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, 745-6203
Vicki H. Metzgar, vicki.metzgar@wku.edu, 745-3343

1. Identification of program:

- 1.1 Program title: Science and Mathematics Education
- 1.2 Degree: Bachelor of Science
- 1.3 Classification of Instructional Program (CIP) Code: 13.1206
- 1.4 Required hours in proposed major program: 34
- 1.5 Special information:

The Science and Math Education (SMED) major may be completed only by students seeking certification as middle grades or secondary grades science or mathematics teachers. Each student must also meet all the requirements to earn a science or mathematics content major in addition to the SMED major. The SMED program is a shared program involving faculty from the College of Education and Behavioral Sciences, the Ogden College of Science and Engineering, and the Potter College of Arts and Letters. Oversight of the SMED program will be the responsibility of the SKyTeach Program Curriculum Committee, and SMED courses will be administered through the Department of Curriculum and Instruction within the College of Education and Behavioral Sciences.

1.6 Program admission requirements:

Earn a grade of C or higher in SMED 101 and SMED 102, and meet requirements for admission to teacher education.

1.7 Catalog description:

Students seeking certification as middle grades (5 - 9) or secondary grades (8 -12) science or mathematics teachers must complete both the Science and Mathematics Education program (SMED, reference number *tbd*) and one of the following: the Middle School Science Education program (MSSE, reference number *tbd*), the Middle School Mathematics Education program (MSME, reference number *tbd*), or a teacher certifiable science or mathematics content major. This combination of programs leads to a bachelor's degree with a minimum of two majors. Completion of the two programs, as well as the successful completion of the current requirements to be recommended for certification, will qualify a student for Kentucky middle grades science or mathematics certification (Grades 5-9) or secondary certification (Grades 8-12) in one of the following approved science or mathematics secondary content fields: Biology, Chemistry, Earth and Space Science, Mathematics, or Physics. Students seeking admission to the SMED program must earn a grade of C or higher in SMED 101 and SMED 102, and meet requirements for admission to teacher education.

Students seeking academic advising with regard to preparation as a science or mathematics teacher should contact the SKyTeach office, Hardin Planetarium, (270) 745-3900, or refer to the SKyTeach web site: <http://skyteach.wku.edu/> for additional information.

The Science and Mathematics Education program requires completion of 34 hours of professional

education courses. The recommended General Education mathematics course is either MATH 117 or MATH 118. The required courses are:

SMED 101	Introduction to Inquiry-Based Approaches to Teaching - 1 hr
SMED 102	Introduction to Inquiry-Based Lesson Design - 2 hrs
SMED 210	Knowing and Learning in Mathematics and Science - 3 hrs
SMED 320	Classroom Interactions - 3 hrs
EXED 330	Intro to Exceptional Education: Diversity in Learning - 3 hrs
SMED 340	Perspectives on Science and Mathematics - 3 hrs
SMED 360	Research Methods for Science and Math Teachers - 3 hrs
SMED 470	Project-Based Instruction - 3 hrs
SMED 489	Student Teaching Seminar - 3 hrs
MGE/SEC 490	Student Teaching - 10 hrs

(MGE 490 for students seeking middle grades certification

or SEC 490 for students seeking for students seeking secondary certification)

Program total: 34 semester hours

2. **Rationale:**

2.1 Reasons for developing the proposed major program:

The lack of certified science and mathematics teachers is a critical concern for schools in Kentucky and throughout the United States. Nationally about a third of high school mathematics students and two-thirds of those enrolled in physical science courses have teachers who did not major in the subject in college or are not certified to teach it. Students in the United States are falling behind in the essential subjects of mathematics and science, putting the nation's position in the global economy at serious risk. Only 29% of U.S. fourth grade students, 33% of eighth grade students, and barely 18% of 12th grade students perform at or above the proficient level in science. Within the nation, Kentucky students rank low in the bottom third. Kentucky is in the bottom 10% of the United States in workforce education, the number of scientists and engineers, the number of high tech businesses, and the number of high tech jobs. Competent and engaged teachers are needed to inspire students to pursue careers in mathematics and science, improve student achievement, and produce a better-prepared workforce.

Recognizing that teachers with strong content knowledge are essential for student achievement in mathematics and science, the University of Texas at Austin started the UTeach mathematics and science teacher preparation program in 1997. In the first ten years of operation, UTeach is responsible for growing the number of students seeking certification as middle or high school mathematics and science teachers from fewer than 45 students to over 450. Among the many important factors for this incredible improvement is the redesign of the UTeach education curriculum to focus specifically on mathematics and science teaching. Given the status of the teacher work force in middle grades and secondary science and mathematics in the State of Kentucky, it is apparent that institutions of higher education must look for new and different ways of recruiting and preparing these teachers. Given that UTeach has been so successful, the College of Education and Behavioral Sciences and the Ogden College of Science and Engineering have collaborated on a plan to train mathematics and science teachers in a new SMED program that will follow the UTeach model.

For some students, the decision to enter teaching does not begin with an interest in education, but with an interest in pure mathematics and science. These students will be recruited early in their college career and supported throughout to become talented and highly qualified Middle Grades or Secondary mathematics or science teachers. SMED graduates will have career opportunities beyond those of traditional Science and Mathematics Education graduates because they will have been grounded in content to a greater extent than current graduates, and they will carry a double major with them at graduation; a mathematics or science major to go alongside the education major. Therefore, SMED graduates will be in demand as educators, as

well as mathematics and science professionals.

SMED graduates will help ease the shortage of mathematics and science teachers currently being experienced across Kentucky and the United States. Goals of the proposed program are that these graduates will enter middle grades and secondary teaching better prepared, be mentored and supported better than current teacher education graduates, and retained at higher rates than is now happening. Thus, the proposed program will prepare more Kentuckians for postsecondary education.

Kentucky communities and economy benefit from increased numbers of highly qualified middle grades and secondary teachers of mathematics and science who return to their communities to teach and reside for their careers. Growing from this, communities will realize gains in workforce preparedness and opportunities for highly skilled and technical 21st century business growth.

SMED students will be recruited from high schools in Kentucky and neighboring states. As the number of students enrolling increases, the program will be capable of expanding to the extended campuses of the Western Kentucky University system. In the 10-year history of the UTeach program there has been a 10-fold increase in the number of students in the program and similar increases in the number of graduates from the program.

2.2 Projected enrollment in the proposed major program:

Based on the number of students currently seeking certification as middle grades or secondary grades science or mathematics teachers, and assuming growth comparable to that experienced by the University of Texas at Austin's UTeach program, the anticipated enrollment is about sixty students per year.

2.3 Relationship of the proposed program to other programs now offered by the department:

For prospective mathematics or science teachers this program will replace the current Middle Grades Education (MGE) major, and prospective secondary mathematics and science teachers will complete different professional education courses in place of the secondary education courses presently required. Middle grades science teachers will now be required to complete the requirements for both the SMED major and the Middle School Science Education (MSSE) major. Middle grades mathematics teachers will now be required to complete the requirements for both the SMED major and the Middle School Mathematics Education (MSME) major. Secondary grades science or mathematics teachers will now be required to complete the requirements for both the SMED major and a teacher certifiable major in Biology, Chemistry, Earth/Space Science, Mathematics, or Physics.

2.4 Relationship of the proposed major program to other university programs:

The SMED major is a replication of the University of Texas at Austin's nationally recognized UTeach program for science and mathematics teacher preparation. This program will replace middle grades and secondary mathematics and science certification programs as an improvement upon current programs.

2.5 Relationship of the proposed major program to similar programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

The SMED major is part of the replication of UTeach, the University of Texas at Austin's highly successful program to prepare larger numbers of qualified mathematics and science teachers. WKU is one of 10 national awardees funded by the National Math and Science Initiative as UTeach replication sites. No other program in Kentucky or surrounding states has been given permission to replicate the UTeach program. The other institutions selected to replicate UTeach outside of Texas are: Florida State University, Louisiana State University, Northern Arizona University, Temple University, University of California – Berkeley, University of California – Irvine, University of Colorado, University of Florida, and University of Kansas.

2.6 Relationship of the proposed major program to the university mission and objectives:

The SMED program is strongly supportive of at least three of the goals of the University:

- The SMED program will increase student learning by implementing a pathway to teacher certification for science and mathematics teachers that insures content expertise alongside pedagogical content knowledge.
- The SMED program will grow a high quality, diverse and engaged student body by placing students in classrooms alongside practicing teachers in the local community from the first semester of their involvement with the program.
- The SMED program will improve the quality of life in Kentucky and beyond by preparing highly qualified middle grades and secondary mathematics and science teachers who will reside in Kentucky communities and prepare a new generation of highly educated, technologically skilled citizens.
- The SMED program will better prepare students by connecting them to real world issues.

3. Objectives of the proposed major program:

The SMED program is designed so that a student completes middle grades or secondary teacher certification while also completing a major in mathematics or one of the science majors approved for teacher certification. The SMED program requirements are coordinated with state and national standards for teacher preparation in all the mathematics and science disciplines, including both process skills and content items. All the teacher competencies required by the Kentucky Educational Professional Standards Board, and assessed through the portfolio and final observation, are encompassed within the SMED course sequence.

The aim of the SMED program is to develop in prospective teachers a deep understanding of how to teach math and science content effectively. This explicitly goes beyond simply combining otherwise disjointed curricula for the mathematics and science content or pedagogy. The SMED program is designed to integrate content and pedagogy. Starting in their first semester of the program, SMED students will participate in carefully supervised field experiences in elementary classrooms where they will teach a minimum of three times, using research-based instructional materials to determine whether teaching is a suitable profession for them. Throughout the course sequence, students will experience a variety of field experiences and will be supervised by Master Teachers, with an emphasis on teaching in high-need schools. Students in the SMED courses will receive detailed written commentary on their teaching from mentor teachers in the field and, whenever possible, from course instructors and master teachers.

The SMED program will provide students with enhanced content knowledge and improved pedagogical content knowledge, which will improve students' opportunities for employment as mathematics and science teachers. Students completing the SMED program will have two majors. One major will be a content major in either mathematics or science. The second major will be in education, and will provide students with teacher certification in Kentucky.

4. Program description:

4.1 Curriculum:

SMED 101	Introduction to Inquiry-Based Approaches to Teaching - 1 hr
SMED 102	Introduction to Inquiry-Based Lesson Design - 2 hrs
SMED 210	Knowing and Learning in Mathematics and Science - 3 hrs
SMED 320	Classroom Interactions - 3 hrs
EXED 330	Intro to Exceptional Education: Diversity in Learning - 3 hrs
SMED 340	Perspectives on Science and Mathematics - 3 hrs
SMED 360	Research Methods for Science and Math Teachers - 3 hrs
SMED 470	Project-Based Instruction - 3 hrs

SMED 489 Student Teaching Seminar - 3 hrs

MGE/SEC 490 Student Teaching - 10 hrs

(MGE 490 for students seeking middle grades certification

or SEC 490 for students seeking for students seeking secondary certification)

The total numbers of required hours in the program is 34. All of the courses are new except EXED 330.

4.2 Accreditation, certification, approval, and/or licensure:

Once the SMED major is established, approval by Kentucky's Education Professional Standards Board (EPSB) will be requested. If the EPSB approves the program, then program graduates will be eligible for recommendations for the specific certifications that correspond to the programs that they complete, i.e., middle grades science certification (Grades 5-9), middle grades mathematics certification (Grades 5-9), or secondary certification (Grades 8-12) in one of five approved content areas: biology, chemistry, earth and space science, mathematics, or physics.

While the College of Education and Behavioral Sciences assumes primary responsibility for the professional preparation of teachers, the opportunity to educate teachers for the schools of the Commonwealth and the nation is shared by the university as a whole. Western Kentucky University is a charter member of the Renaissance Group for Teacher Education, which reflects its total campus commitment to quality teacher education programs.

WKU's professional education unit is accredited by the National Council for the Accreditation of Teacher Education (NCATE), and all teacher preparation programs at WKU are approved by Kentucky's Education Professional Standards Board.

4.3 Program delivery:

Courses in the SMED program will be taught by faculty from departments in the College of Education and Behavioral Sciences, Ogden College of Science and Engineering, and the Potter College of Arts and Letters. One of the unique aspects of the SMED program is its approach to teacher preparation. Students entering SMED courses are placed in teaching situations in their first semester of work. Throughout the program, students continue to experience teaching first hand, and they work with fully-trained, exceptional Master Teachers to reflect on and grow from their teaching experiences. Alongside this teaching experience, students are concurrently enrolled in rigorous content coursework in the Ogden College toward the completion of a major in mathematics or science.

5. Resources

5.1 Faculty:

SMED courses will be taught by faculty designated by WKU. The SMED program employs experienced secondary math and science teachers to supervise field experiences and teach courses in the program. These Master Teachers are tremendous examples and guides. They are knowledgeable about what new teachers really face and need, and they are indispensable in providing connections with local school district teachers and administrators.

Faculty for the SMED program will include current members of the Department of Curriculum and Instruction from the College of Education and Behavioral Sciences; Ogden College of Science and Engineering Departments of Mathematics and Computer Science, Biology, Chemistry, Physics and Astronomy, and Geography and Geology; and Potter College of Arts and Letters, Departments of History and Philosophy and Religion.

5.2 Technological and electronic informational resources (e.g., databases, e-journals):

Existing resources are adequate.

5.3 Facilities and equipment:

The NMSI funding for replication of the UTeach program at WKU is supplemented by substantial contributions from the Ogden College of Science and Engineering and the College of Education and Behavioral Sciences. These sources have provided for substantial refurbishment and renovation of facilities and equipment in support of SMED courses.

6. **Proposed term for implementation:** Fall 2009

7. **Dates of prior committee approvals:**

Department of Curriculum & Instruction: 10/31/2008

CEBS Curriculum Committee: _____

(For information) OCSE Curriculum Committee: _____

Professional Education Council: _____

Undergraduate Curriculum Committee: _____

University Senate: _____

Attachment: Program Inventory Form

MEMO TO: CEBS Curriculum Committee

FROM: Retta Poe

DATE: 10/02/08

SUBJECT: Report from the Alternate Admission Subcommittee

Members of the Alternate Admission Subcommittee of the CEBS Curriculum Committee were requested to individually review one application for alternate admission to the MAE program in Secondary Education. Four of five members of the subcommittee participated in reviewing the application and returned their recommendations to me by 10/01/08.

Subcommittee members reviewed the application using the *Checklist for Alternate Admissions Subcommittee*, which was developed based on the college=s policy for alternate admission applications. The subcommittee recommended that J. B. be unconditionally admitted to the MAE program in Secondary Education. I have returned his alternate admission application to Graduate Studies with this recommendation.

MEMO TO: CEBS Curriculum Committee

FROM: Retta Poe

DATE: 11/19/08

SUBJECT: Report from the Alternate Admission Subcommittee

Members of the Alternate Admission Subcommittee of the CEBS Curriculum Committee were requested to individually review one application for alternate admission to the MAE program in Exceptional Education, one application for alternate admission to the MAE program in Adult Education, and one application for alternate admission to the MS program in Library Media Education. All five members of the subcommittee participated in reviewing the applications to the Exceptional Education and Adult Education programs, and three subcommittee members reviewed the application to the LME program. Subcommittee members returned their recommendations to me by 10/30/08.

Subcommittee members reviewed the applications using the *Checklist for Alternate Admissions Subcommittee*, which was developed based on the college=s policy for alternate admission applications. The subcommittee recommended that R.C. be unconditionally admitted to the MAE program in Exceptional Education, that K.P. be unconditionally admitted to the MAE program in Adult Education, and that W.A. be unconditionally admitted to the MS program in Library Media Education. I have returned the alternate admission applications to Graduate Studies with these recommendations.

**College of Science and Engineering
Department of Physics and Astronomy
Proposal to Create a New Major Program
(Action Item)**

Contact Person: Richard Gelderman, richard.gelderman@wku.edu, 745-6203

1. Identification of program:

- 1.1 Program title: Middle School Science Education
- 1.2 Degree: Bachelor of Science
- 1.3 Classification of Instructional Program (CIP) Code: 13.1316
- 1.4 Required hours in proposed major program: 45
- 1.5 Special information:

The Middle School Science major is designed to prepare grade 5-9 science teachers to teach earth and space sciences, life sciences, and physical sciences. Western Kentucky University's ability to produce certified teachers is granted through Kentucky's Education Professional Standards Board (EPSB), which is responsible for issuing certificates for all Kentucky teachers. The EPSB reviews all teacher preparation programs, considering, among other factors, evidence of alignment between the courses in each program with the Kentucky Curriculum and Assessment requirements as specified in the Learner Goals based on Academic Expectations, the Kentucky Program of Studies and the Core Content for the Commonwealth Accountability Testing System (CATS). This alignment must establish in detail how the necessary knowledge is delivered through each of the relevant courses in the teacher preparation curriculum leading to a specified certification. The Middle School Science Education program is designed to provide that content knowledge.

- 1.6 Program admission requirements:
Students entering the Middle School Science program will not have to satisfy any admission requirements beyond those established for admission to the University.

- 1.7 Catalog description:
The Middle School Science Education major (MSSE, reference number *TBA*) is for students who plan to teach science in grades 5 through 9. The MSSE major requires completion of the Science and Mathematics Education (SMED) program also. Upon successful completion of both majors, the student will earn a Bachelor of Science degree and will qualify for an institutional recommendation for a Kentucky Provisional Certificate for Teaching in the Middle Grades (5-9) science field.

To earn a MSSE major the student must earn a grade of "C" or better in each of the required core science courses (30 semester credit hours) and in each of the minimum of 15 semester credit hours of courses selected from the list of restricted electives. MSSE majors must earn a grade of "C" or better in a mathematics course chosen from MATH 117, 118 or 126. Students must have an overall grade point average of at least 2.5 for all completed science courses.

Students seeking academic advising with regard to preparation as a mathematics or science teacher should contact the SKyTeach office, Hardin Planetarium, (270)745-3900, or refer to the SKyTeach web site - <http://skyteach.wku.edu> for additional information.

Upon completing the appropriate certification requirements (including attaining a 2.5 GPA in both majors and overall and the minimum required scores on the appropriate PRAXIS II examinations) the student will be eligible to apply for Kentucky certification for Middle Grades Science, Grades 5-9.

Required Core (30 or 31 semester credit hours)

3 hrs	ASTR 104	Astronomy of the Solar System
or 3 hrs	ASTR 106	Astronomy of Stellar Systems
3/1 hrs	GEOL 111/113	The Earth
3/1 hrs	GEOL 112/114	Earth History
3/1 hrs	BIOL 120/121	Biological Concepts: Cells, Metabolism, and Genetics
3/1 hrs	BIOL 122/123	Biological Concepts: Evolution, Diversity & Ecology
3/1 hrs	CHEM 105/106	Fundamentals of General Chemistry
or 4/1 hrs	CHEM 120/121	College Chemistry I
3 hrs	PHYS 105	Concepts of the Physical World
4 hrs	PHYS 201	College Physics I
or 3/1 hrs	PHYS 231/232	College Physics and Biophysics I

Restricted Electives (Minimum of 15 semester credit hours required, representing all three disciplines. Asterisk indicates that another restricted elective is a pre-requisite.)

3 hrs	ASTR 405	Astronomy for Teachers
4 hrs	GEOL 308	Structural Geology
3 hrs	GEOL 310	General Hydrology
3 hrs	GEOL 311	Oceanography
3 hrs	GEOL 325	Intro to Minerals and Rocks
3 hrs	GEOL 380	Intro Field Techniques
4 hrs	GEOL 405	Paleontology
3 hrs	GEOG 427*	Water Resources
3 hrs	GEOG 471	Natural Resource Management
3 hrs	BIOL 325	Insect Biodiversity
3 hrs	BIOL 326	Ornithology
3 hrs	BIOL 327	Genetics
3 hrs	BIOL 334	Animal Behavior
3/1 hrs	BIOL 319/322	Introduction to Molecular and Cell Biology
3 hrs	BIOL 348	Plant Taxonomy
3 hrs	BIOL 350*	Introduction to Recombinant Genetics
3 hrs	BIOL 407	Virology
3/1 hrs	BIOL 411/412*	Cell Biology
3 hrs	BIOL 430*	Evolution: Theory and Process
3 hrs	BIOL 440*	Developmental Genetics
3 hrs	PHYS 410	Physics for Teachers

2. **Rationale:**

2.1 Reason for developing the proposed major program:

The lack of certified science and mathematics teachers is a critical concern for schools in Kentucky and throughout the United States. Nationally, about one-third of high school math students and two-thirds of those enrolled in physical science have teachers who did not major in the subject in college or are not certified to teach it. Students are falling behind in the essential subjects of math and science, putting the United States' position in the global economy at serious risk. Only 29% of U.S. fourth grade students, 33% of eighth grade students, and barely 18% of 12th grade students perform at or above the proficient level in National Assessment of Educational Progress (NAEP) science test. Within the nation, Kentucky students rank in the bottom third. Kentucky is in the bottom 10% of the United States in workforce education, the number of scientists and engineers, the number of high tech businesses, and the number of high tech jobs. Competent and engaged teachers are needed to inspire students to pursue a career in math and science, improve student achievement and produce a better-prepared workforce.

The Middle School Science Education degree will satisfy the conditions of the funding agreement with the National Math and Science Initiative (NMSI) for WKU to be one of the ten national awardees for replication of the University of Texas at Austin's nationally recognized UTeach program for science and math teacher preparation. Recognizing that an essential condition for student achievement in mathematics and science is a teacher with strong content knowledge, the University of Texas at Austin started the UTeach mathematics and science teacher preparation program in 1997. In the first ten years of operation, UTeach is responsible for increasing the number of students seeking certification as middle or high school math and science teachers from fewer than 45 students to over 450. Among the many important factors in this incredible improvement are the redesign of the UTeach education curriculum to focus specifically on mathematics and science teaching and the strong content background that each student receives through either a math or science degree.

2.2 Projected enrollment in the proposed major program:

Based on the current number of students currently seeking certification as middle grades science or mathematics teachers, and assuming a growth comparable to that experienced by the University of Texas at Austin's UTeach program, about twenty students per year are projected to graduate with a Middle School Science Education (MSSE) degree.

2.3 Relationship of the proposed major program to other programs now offered by the department: This program will shift the content preparation for middle school science teachers from the department of Curriculum and Instruction to the SKyTeach program, through the department of Physics and Astronomy.

2.4 Relationship of the proposed major program to other university programs:

The MSSE program will replace the current Middle Grades Education (MGE) program for science or mathematics teachers. The requirements for the MSSE program are an expansion of the current single field science specialization of the existing MGE major. Students seeking certification as a middle grades science teacher will now be required to complete the requirements for both the SMED major and the MSSE major. Requirements for additional elective upper division science courses have been added to satisfy University policies regarding credit hours earned in 300 and 400 level courses.

2.5 Relationship of the proposed major program to similar programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

No other institution in Kentucky requires a separate science major for its middle school science teacher certification candidates, instead housing the preparation for middle grade education in an education department. Because teacher certification regulations differ substantially from state to

state, it is not meaningful to compare our program to those in other states.

- 2.6 Relationship of the proposed major program to the university mission and objectives:
This MSSE program will increase student learning by implementing a pathway to teacher certification for science and mathematics teachers that insures content expertise alongside pedagogical content knowledge and will improve the quality of life in Kentucky and beyond by preparing highly qualified middle grades and secondary mathematics and science teachers who will reside in Kentucky communities and prepare a new generation of highly educated, technologically skilled citizens.

3. Objectives of the proposed major program:

The proposed major program, when combined with the SMED major, is designed to integrate content and pedagogy and to prepare prospective teachers with a deep understanding of how to teach math and science content effectively. Recognition of the importance of content courses in teacher preparation programs has increased as mathematics and science teachers' deficiencies have become more politicized (Sanders and Morris, 2000). The U.S. Department of Education recently produced a report that challenges current methods of teacher training and places a new charge on discipline-specific departments "... the only measurable teacher attributes that relate directly to improved student achievement are high verbal ability and solid content knowledge" (Paige, 2002, <http://www.title2.org/ADATitleIIRreport2002.pdf>).

The Teaching Principle from the Principles and Standards for School Mathematics states that, "Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well" (NCTM, 2000). Effective teachers must have a profound understanding of mathematics (Ma, 1999). A profound understanding, in Ma's description, has three related meanings: deep, vast, and thorough. A deep understanding is one that connects mathematics with ideas of greater conceptual power. Vast refers to connecting topics of similar conceptual power. Thoroughness is the capacity to weave all parts of the subject into a coherent whole. "Effective teachers are able to guide their students from their current understandings to further learning and prepare them for future travel" (National Research Council, 2001).

4. Program description:

4.1 Curriculum:

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3/1 hrs	BIOL 411/412*	Cell Biology
3 hrs	BIOL 430*	Evolution: Theory and Process
3 hrs	BIOL 440*	Developmental Genetics
3 hrs	PHYS 410	Physics for Teachers

4.2 Accreditation, certification, approval, and/or licensure:

WKU's professional education unit is accredited by the National Council for the Accreditation of Teacher Education (NCATE), and all teacher preparation programs at WKU are approved by Kentucky's Education Professional Standards Board (EPSB). Approval of the MSSE program by the EPSB will allow program graduates to receive WKU's recommendation for middle grades science certification (Grades 5-9). While the College of Education and Behavioral Sciences assumes primary responsibility for the professional preparation of teachers, the opportunity to educate teachers for the schools of the Commonwealth and the nation is shared by the university as a whole.

4.3 Program delivery:

Courses in the MSSE program will be taught by faculty from the departments of Biology, Chemistry, Geology & Geography, and Physics & Astronomy. Students seeking a MSSE major will be required to earn a second major in SMED. Throughout the program students will experience teaching first hand and they will work with SKyTeach Master Teachers to reflect on and grow from their teaching experiences.

5. Resources

5.1 Faculty:

Existing staffing levels are adequate to deliver the courses for this program since no new courses are required for the Middle School Science Education curriculum.

5.2 Technological and electronic informational resources (e.g., databases, e-journals)

No additional resources will be required.

5.3 Facilities and equipment:
No additional resources will be required.

6. **Proposed term for implementation:** Fall 2009

7. **Dates of prior committee approvals:**

Department of Physics and Astronomy: 21 November 2008

Ogden College Curriculum Committee: _____

Professional Education Council: _____

University Curriculum Committee: _____

University Senate: _____

Attachment: Program Inventory Form