

FOR INFORMATION:

The following courses were approved by the UWGC to be offered as a distance education course:

- ECON 820: Managerial Economics for Decision-Making and Leadership
- ENGL 870: Teaching Practicum
- ENGL 900: Dissertation Research
- ENGL 954: Candidacy Proseminar
- FDNT 636: Nutrition Education and Intervention
- FDNT 637: Nutrition Counseling and Intervention
- FDNT 649: Vitamins, Minerals, and Water
- FDNT 651: Professional Dietetic Practice
- FDNT 696: Dietetic Internship
- FDNT 770: Clinical Nutrition Assessment
- FDNT 772: Clinical Nutrition Therapy I
- MATH 516: Data Science Theory & Application
- MATH 618: Data Science Theory & Application
- MKTG 536: Retail and Omnichannel Management
- LDRS 810: Nonprofit Management
- LDRS 816: Survey of Social and Organization Theories II
- LDRS 861: Program Evaluation
- LDRS 862: Analysis of Social Data
- LDRS 865: Qualitative Research Methods
- SAHE 737: The American College Student
- SPLP 635: Seminar in Communication

FOR ACTION:

**1. DEPARTMENT: BIOLOGY
COURSE REVISION**

APSCUF Rep Council approved

Course: BIOL 576

Rationale: This course was originally proposed decades ago, for which an original proposal and syllabus of record cannot be located. The rationale for this proposal is to revise the catalog description to better reflect topics currently covered in the course, remove unnecessary and restrictive prerequisites, and add a distance education option.

Summary:

Current Course Title: Parasitology	Proposed Course Title: Parasitology
Current Prerequisite(s): One year Biology, Vertebrate and Invertebrate Zoology	Proposed Prerequisite(s): None
Current Catalog Description:	Proposed Catalog Description:

Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa and flatworm and roundworm species of man. Dissection of hosts for parasites.	Studies parasitic protozoa, flatworms and roundworms. Emphasizes species parasitizing humans and includes their classification, structure, biochemistry, physiology, molecular biology, pathogenicity, ecology, and epidemiology.
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2. DEPARTMENT: COMM MEDIA

APSCUF Rep Council approved

COURSE REVISION

Course: COMM 795

Rationale: Students in the Strategic Communication thesis (research) track only have the option of taking all six credits of thesis in a single semester. To provide flexibility and a more realistic timeline for thesis research and writing, the proposal is to change the credit hours for COMM 795 Thesis from 6-credits to variable credits ranging from one to six credits. The requirement of six total credits for the thesis is not being changed.

Summary:

Current Credit Duplicate: No	Proposed Duplicate Credit: This course may be taken for duplicate credit.
Current Number of Credits: 6	Proposed Number of Credits: 1-6

3. DEPARTMENT: ENGLISH

APSCUF Rep Council approved

NEW COURSE

Course: ENGL 870

Rationale: This course is part of our redesigned curriculum for Composition and Applied Linguistics. Students in our redesigned program will be active teachers, teaching at a variety of universities globally. This course offers them an opportunity to have mentoring, reflection, support, and explore teaching research while they are teaching for their current universities and thus, allows them to develop expertise as teacher/scholars, conduct research on their own teaching, and hone a range of teaching-related skills such as observation and the development of a teaching philosophy. This course provides students with ongoing support while teaching in diverse contexts globally.

Summary:

Course Title	Teaching Practicum
Number of Credits	Class Hours per Week: Lab Hours:

	Credits:3
Prerequisites	None
Catalog Description	Deepens students understanding of teaching composition and teacher identity using research-based approaches. Reflect on existing teaching practices and engage in reflection-in-action. Develop research-supported teaching practices through the scholarship of teaching and learning. Practical outcomes include a teaching portfolio, draft of a teacher/research article, and a teaching philosophy.

NEW COURSE

Course: ENGL 900

Rationale: ENG 900: Dissertation Writing offers doctoral candidates advanced support during their dissertation writing process. This course, using a research-supported writing group model, allows dissertation writers to have direct feedback, instruction, and support from peers and faculty during dissertation writing. It allows students to develop advanced research, analysis, writing, and peer review skills. This course is part of the larger Composition and Applied Linguistics program redesign.

Summary:

Course Title	Dissertation Research
Number of Credits	Class Hours per Week: Lab Hours: Credits:3
Prerequisites	None
Catalog Description	Provides a networked writing experience for completing a chapter of a dissertation. Writers will meet regularly with each other, have peer and faculty support, develop an IRB in conjunction with their chair, and develop knowledge of professional writing and research practices.

NEW COURSE

Course: ENGL 954

Rationale: This proposal will add a course requirement, ENGL 954 Candidacy Proseminar, to the Literature and Criticism doctoral program. The course provides instruction on the development and application of a range of academic and professional writing genres and skills. Students will need to demonstrate mastery of these genres and skills as part of their Candidacy Review. The course will be offered annually in the winter session. This will allow our two different cohorts of graduate students (summers-only and academic-year) to take it together after their first summer sessions (summers-only) or fall semester (academic-year) of classes. Candidacy review occurs at the same time annually for both cohorts: in the spring after the first

year for summers-only student and the spring after the first fall semester for academic-year students.

Summary:

Course Title	Candidacy Proseminar
Number of Credits	Class Hours per Week: Lab Hours: Credits:3
Prerequisites	For Summers-Only students, must have completed at least 6 credits. For academic year students, students must have completed at least 9 credits.
Catalog Description	Introduces genres of professional writing, including teaching philosophies, grants, abstracts and conference papers, and reviews standards of successful academic writing in the field of English Studies. Stresses strategies for significant revision of written academic and scholarly writing.

**4. DEPARTMENT: FOOD AND NUTRITION
NEW COURSE**

APSCUF Rep Council approved

Course: FDNT 636

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To meet the accreditation-required competencies of both knowledge and experiential learning, this course contains ACEND (Accreditation Council for Education in Nutrition and Dietetics) required competencies and performance indicators. This course incorporates both didactic and experiential components. It presents nutrition education and intervention principles and best practices and then has students utilize this knowledge to complete case studies, simulations, and guided counseling experiences. Students going through this course as part of the ACEND-accredited future graduate model will acquire the graduate-level knowledge needed to practice in their career as a registered dietitian.

Summary:

Course Title	Nutrition Education and Intervention
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3

Prerequisites	Enrolled in MS in Food and Nutrition, Dietitian-Nutritionist Program, or Department permission
Catalog Description	Addresses the selection or design, implementation, and evaluation of strategies to translate nutrition knowledge into action. Emphasizes promotion and communication of food, nutrition, and health information to diverse groups in a variety of settings.

NEW COURSE

Course: FDNT 637

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master's level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To meet the accreditation-required competencies of both knowledge and experiential learning, this course contains ACEND (Accreditation Council for Education in Nutrition and Dietetics) required competencies and performance indicators. This course incorporates both didactic and experiential components. It presents nutrition counseling and intervention principles and best practices and then has students utilize this knowledge to complete case studies, simulations, and guided counseling experiences. Students going through this course as part of the ACEND-accredited future graduate model will acquire the graduate-level knowledge needed to practice in their career as a registered dietitian.

Summary:

Course Title	Nutrition Counseling and Intervention
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	Enrolled in MS in Food and Nutrition, Dietitian-Nutritionist Program, or Department permission
Catalog Description	Focuses on the application of evidence-based approaches for nutrition counseling and intervention strategies to promote behavior change.

NEW COURSE

Course: FDNT 649

Rationale: This course will present the foundational biochemical role of vitamins, minerals and water, which is knowledge critical to becoming a registered dietitian no matter which career path a student chooses. This course will also allow students to critically analyze relevant scientific literature related to human health and disease and apply it to case studies that represent real world clinical scenarios.

Summary:

Course Title	Vitamins, Minerals, and Water
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	Enrolled in MS in Food and Nutrition, Dietitian-Nutritionist Program, or Department permission
Catalog Description	Focuses on biochemical role of vitamins, minerals, and water in human metabolism. Examines biochemical and physiologic functions and current research implications in health and disease.

NEW COURSE

Course: FDNT 770

Rationale: As of 2024 the accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, will change the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master's level and expand students learning objectives (SLO). To remain competitive, the Department of Food and Nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course is part one of a three-3 credit courses series to incorporate didactic and experiential components. No current course in the department or University, fulfils the required ACEND competencies related to nutrition assessment and clinical medical nutrition therapy.

Summary:

Course Title	Clinical Nutrition Assessment
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	Enrolled in MS in Food and Nutrition, Dietitian-Nutritionist Program, or Department permission
Catalog Description	Analyze and evaluate dietary, biochemical, anthropometric, functional, socioeconomic, and clinical data to assess nutrition status of individuals and populations throughout the lifecycle. The Nutrition Care Process will be used to perform a nutrition diagnosis, plan a nutrition intervention, and evaluate and monitor the nutritional status using the appropriate professional language and documentation.

NEW COURSE

Course: FDNT 772

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To remain competitive, the Department of Food and Nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course is part two of a three-3 credit courses (total of 9 credits in the series) series to incorporate didactic and experiential components. No current course in the department or University, fulfills the required ACEND competencies related to nutrition assessment and clinical medical nutrition therapy.

Summary:

Course Title	Clinical Nutrition Therapy I
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	"C" or better in FDNT 770, Enrolled in the MS in Food and Nutrition Dietitian-Nutritionist Program
Catalog Description	Applies the Nutrition Care Process to develop a nutrition diagnosis, intervention, and evaluation/monitoring to specific diseases/conditions such as CVD, diabetes, energy imbalances, upper gastrointestinal system and lower gastrointestinal system.

COURSE REVISION

Course: FDNT 612

Rationale: Effective on January 1, 2024 (implementation date), the accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). To remain competitive, the department of food and nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course must be revised to expand on some student learning outcomes and delete others. Specifically, include menu building, procurement, production, budgeting and scheduling, food and facility safety, sanitation, and food science.

Summary:

Current Course Title:	Proposed Course Title:
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<p>Administration of Food Service Systems</p> <p>Current Prerequisite(s): Department Permission</p> <p>Current Catalog Description: Addresses foodservice as a system of interrelated parts and of controlling management resources. Analyzes different types of foodservice delivery systems and covers legal responsibilities of a foodservice administrator.</p>	<p>Administration of Food Service Systems</p> <p>Proposed Prerequisite(s): Enrolled in MS in Food and Nutrition - Dietitian-Nutritionist Program, or by department permission</p> <p>Proposed Catalog Description: Applies quantity food management principles to problem-solving within a scope applicable to a variety of food service settings in healthcare and schools. Includes regulatory requirements, food science principles, procedures for inventory control, food production, and purchasing, risk assessment, budgeting, and food safety and sanitation practices.</p>
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COURSE REVISION

Course: FDNT 651

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To remain competitive, the department of food and nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course must be revised to expand on some student learning outcomes and delete others. Specifically, this course is taking out clinical and management topics, and replacing them with legal terminology, and conversational and interpersonal skills building.

Summary:

<p>Current Course Title: Professional Dietetic Practice</p> <p>Current Prerequisite(s): FDNT 604 or experience as a clinical dietitian</p> <p>Current Catalog Description: Examines professional topics relevant to the dietetic professional. Provides a forum for clinical case study presentations and education</p>	<p>Proposed Course Title: Professional Dietetic Practice</p> <p>Proposed Prerequisite(s): Enrolled in MS in Food and Nutrition - Dietitian-Nutritionist Program, or by department permission</p> <p>Proposed Catalog Description: Examines professional topics relevant to the field of dietetics and nutrition, to include ethics, diversity, inclusion, equity, policy-</p>
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about professional development opportunities and challenges.	making, communication, and career preparation.
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COURSE REVISION

Course: FDNT 696

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To remain competitive, the department of food and nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course must be revised to expand on some student learning outcomes and delete others. Specifically, the 696 course houses the field experience components required for accreditation. Students must have exposure to community nutrition, food service, long-term care, and acute care settings. The 696 course provides the platform for field experience, along with well-founded simulations.

Summary:

<p>Current Course Title: Dietetic Internship</p> <p>Current Prerequisite(s): Department permission and enrollment as intern or ISPP student.</p> <p>Current Catalog Description: Supervised practice experience for students who are enrolled in IUP’s accredited dietetic internship or Individualized Supervised Practice Pathway (ISPP) programs.</p>	<p>Proposed Course Title: Experiential Practice in Dietetics</p> <p>Proposed Prerequisite(s): Enrolled in MS in Food and Nutrition - Dietitian Nutritionist-Program</p> <p>Proposed Catalog Description: Engages in experiential learning in dietetics settings, both in the field and through simulation, to include, but not limited to community nutrition, food service settings, long-term care, and acute care.</p>
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COURSE REVISION

Course: FDNT 773

Rationale: The accrediting body, Accreditation Council for Education in Nutrition and Dietetics, ACEND, has changed the minimum requirements of education of a Registered Dietitian Nutritionist (RDN) to a master’s level and updated students learning objectives (SLO). Effective January 1, 2024 completion of a master's degree along with supervised practice are required to take the national registration examination to become a Registered Dietitian-Nutritionist. To remain competitive, the Department of Food and Nutrition was accepted as a national demonstration program to trial a new model, called the Future Graduate Model. To meet the accreditation-required competencies of both knowledge and experiential learning, this course is

part two of a three-3 credit courses (total of 9 credits in the series) series to incorporate didactic and experiential components. No current course in the department or University, fulfills the required ACEND competencies related to nutrition assessment and clinical medical nutrition therapy.

Summary:

<p>Current Course Title: Advanced Clinical Nutrition</p> <p>Current Prerequisite(s): Completion of FDNT 772-Clinical Nutrition Therapy I with a "C" or better. Enrolled in the MS in Food and Nutrition Dietitian-Nutritionist Program</p> <p>Current Catalog Description: In-depth investigation of diet and nutrition in the prevention and treatment of select diseases and conditions. Will address measures of nutrition status, intervention, monitoring and evaluation using the nutrition standardized language and evidence-based practice. Focus will be on current nutrition issues impacting clinical practice.</p>	<p>Proposed Course Title: Clinical Nutrition Therapy II</p> <p>Proposed Prerequisite(s): None</p> <p>Proposed Catalog Description: Investigates diet and nutrition in the pathophysiology, prevention and treatment of select diseases and conditions. Addresses measures of nutrition status, intervention, monitoring and evaluation using the nutrition standardized language and evidence-based practice.</p>
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PROGRAM REVISIONS

Program: MS Food and Nutrition

Rationale: The MS in Food and Nutrition is being revised to (1) better meet the interest area of students and knowledge requirements of the profession; and (2) to align the MS curriculum with accreditation requirements for the Dietitian-Nutritionist Program (DNP).

IUP Department of Food and Nutrition received accreditation approval by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) for the DNP on February 12, 2021. The DNP is a replacement program for the Dietetic Internship Certificate Program (DI-CERT). The DI-CERT is a one-year post-baccalaureate graduate certificate program. The DNP is a two-year MS degree program with integrated supervised practice experience. Transition to the DNP is critical because beginning January 1, 2024 the Commission on Dietetic Registration (CDR) will require that students earn their master's degree (in addition to obtaining supervised practice experience) in order to obtain eligibility to sit for the national examination for registered dietitian-nutritionists. The DI-CERT will close effective May 31, 2021 and the DNP will start on June 1, 2021.

Program revisions are categorized in two areas:

1. Better meeting the interest area of current/prospective students and knowledge requirements of the profession in the area of nutrition education. Revisions include:

- Delete the Administration track because there has not been expected growth in this in this track.
 - Continue the Education track with this track as an option for MS in Food and Nutrition students to select.
 - Update courses included as part of the Professional Core.
2. Modify/Align the MS curriculum to comply with the accreditation requirements of the DNP.
- Add or revise courses to meet required competencies and performance indicators.
 - New courses include: FDNT 649 Vitamins, Minerals, Water; FDNT 636 Nutrition Education and Intervention; FDNT 637 Nutrition Counseling and Intervention; FDNT 770 Clinical Nutrition Assessment; and FDNT 772 Clinical Nutrition Therapy I
 - Revised courses include: FDNT 612 Administration of Food Service Systems; FDNT 651 Professional Dietetic Practice; and FDNT 773 Advanced Medical Nutrition Therapy to Clinical Nutrition Therapy II

Summary:

Current	Proposed
Degree Requirements (36 cr.) Thesis and Non-Thesis Degree Options are distinguished based on III. Research Requirement.	Degree Requirements (36 cr.) Thesis and Non-Thesis Degree Options are distinguished based on II. Research Requirement.
Core Courses (12 cr.) FDNT 564 Nutrition Research Methods 3 cr. FDNT 645 Proteins, Carbohydrates, Fats 3 cr. FDNT 647 Vitamins 3 cr. FDNT 648 Minerals and Water 3 cr.	I. Nutrition Science Core Courses (12 cr.) FDNT 564 Nutrition Research Methods 3 cr. FDNT 645 Proteins, Carbohydrates, Fats 3 cr. FDNT 649 Vitamins, Minerals, Water 3 cr. FDNT 771 Lifecycle Nutrition 3 cr.
II. Tracks –Select One (9 cr.) A. Administration Track FDNT 515 Sustainable Nutrition 3 cr. FDNT 522 Public Health Nutrition & Epidemiology 3 cr. FDNT 612 Administration of Food Service Systems 3 cr. FDNT 625 Community Nutrition and Policy 3 cr. B. Education Track FDNT 630 Linking Nutrition Theory and Research to Practice 3 cr. FDNT 641 Eating Behaviors and Food Habits 3 cr. FDNT 635 Intervention and Education Strategies 3 cr. FDNT 771 Lifecycle Nutrition 3 cr.	II. Research Requirement (6 cr.) All students must engage in research. DNP students are exempt. Thesis option students will complete 6 credits of FDNT 795 Thesis. Non-thesis option students will enroll in FDNT 661 and FDNT 662, which must be taken in the same academic year or summer concurrent sessions. FDNT 795 Thesis 6 cr. OR FDNT 661 Designing Effective Food and Nutrition Research Projects 3 cr. FDNT 662 Applying Food and Nutrition Research Methods 3 cr.
III. Research Requirement (6 cr.) All students must engage in research. Thesis option students will complete 6 credits of FDNT	III. Track Selection – Optional (18 cr.) <u>Education Track</u> FDNT 515 Sustainable Nutrition 3 cr. FDNT 522 Public Health Nutrition & Epidemiology 3 cr. FDNT 571 Integrative Nutrition in Complementary and Alternative Healthcare 3 cr.

<p>795 Thesis. Non-thesis option students will enroll in FDNT 661 and FDNT 662.</p>	<p>FDNT 625 Community Nutrition and Policy 3 cr.</p>
<p>FDNT 795 Thesis 6 cr.</p>	<p>FDNT 630 Linking Nutrition Theory and Research to Practice 3 cr.</p>
<p>OR</p>	<p>FDNT 636 Nutrition Education and Intervention 3 cr.</p>
<p>FDNT 661 Designing Effective Food and Nutrition Research Projects 3 cr.</p>	<p>FDNT 641 Eating Behaviors and Food Habits 3 cr.</p>
<p>FDNT 662 Applying Food and Nutrition Research Methods 3 cr.</p>	<p>FDNT 771 Lifecycle Nutrition 3 cr.</p>
<p>IV. Electives (9 cr.)</p>	<p>IV. Electives (9 cr.) (0 - 18 cr.)</p>
<p>Students will elect additional courses from the IUP Graduate Catalog (including FDNT courses) that are appropriate for their needs and interests as they work toward meeting the program objectives. The Graduate Coordinator or Department Chair will approve elective courses.</p>	<p>Students will elect additional courses from the IUP Graduate Catalog (including FDNT courses) that are appropriate for their needs and interests as they work toward meeting the program objectives. The Graduate Coordinator or Department Chair will approve elective courses.</p>
<p>FDNT 545 Advanced Sports Nutrition 3 cr.</p>	<p>FDNT 545 Advanced Sports Nutrition 3 cr.</p>
<p>FDNT 558 Advanced Human Nutrition 3 cr.</p>	<p>FDNT 571 Integrative Nutrition in Complementary and Alternative Healthcare 3 cr.</p>
<p>FDNT 571 Integrative Nutrition in Complementary and Alternative Healthcare 3 cr.</p>	<p>For students who do not opt to select a track, courses listed in the Education track may be applied as electives. Only 6 credits of FDNT696 or FDNT698 may count toward the degree.</p>
<p>FDNT 642 Contemporary Issues in Food and Nutrition 3 cr.</p>	<p>FDNT 571 Integrative Nutrition in Complementary and Alternative Healthcare 3 cr.</p>
<p>FDNT 651 Professional Dietetic Practice 3 cr.</p>	<p>FDNT 630 Linking Nutrition Theory and Research to Practice 3 cr.</p>
<p>FDNT 653 Leadership for Nutrition Professionals 3 cr.</p>	<p>FDNT 642 Contemporary Issues in Food and Nutrition 3 cr.</p>
<p>FDNT 696 Dietetic Internship 1-6 cr.</p>	<p>FDNT 651 Professional Dietetic Practice 3 cr.</p>
<p>FDNT 698 Internship 1-6 cr.</p>	<p>FDNT 653 Leadership for Nutrition Professionals 3 cr.</p>
<p>FDNT 773 Advanced Clinical Nutrition Therapy 3 cr.</p>	<p>FDNT 642 Contemporary Issues in Food and Nutrition 3 cr.</p>

~~FDNT 696 Dietetic Internship~~

~~— 1-6 cr.~~

FDNT 698 Internship 1-6 cr.

~~FDNT 773 Advanced Clinical Nutrition
Therapy ————— 3 cr.~~

**Dietitian-Nutritionist Program (DNP) Only
(33 cr.)**

Only students enrolled in the Dietitian-Nutritionist Program (DNP) are permitted to enroll in these courses.

FDNT 612 Administration of Food Service
Systems

3 cr.

FDNT 637 Nutrition Counseling and
Intervention 3 cr.

FDNT 651 Professional Dietetic Practice

3 cr.

FDNT 653 Leadership for Nutrition

Professionals 3 cr.

FDNT 696 Dietetic Internship (ACEND accred)

12 cr.

FDNT 770 Clinical Nutrition Assessment

3 cr.

FDNT 772 Clinical Nutrition Therapy I

3 cr.

FDNT 773 Clinical Nutrition Therapy II

3 cr.

Total Credit Requirements for Accredited DNP

63 Credits =

[Nutrition

Science Core

(12 cr) +

Education

Track (18 cr) +

DNP Only

Courses (33 cr)]

5. DEPARTMENT: ADMINISTRATION AND LEADERSHIP STUDIES

VOD

APSCUF Rep Council approved

Program: PhD

Rationale: Revisions are planned to adapt the program, its curriculum, recruitment, and delivery to meeting changes in university, student, and workforce needs. These changes will result in cost savings to the university in the form of reduced travel expenses for delivery of the program, particularly in Harrisburg. They also should increase revenue through increased enrollment by penetrating new markets of prospective students. Additionally, the proposed changes will draw upon existing resources and, as appropriate, seek to access a broader range of faculty in the CHSS, as well as across the university and, potentially, interuniversity landscapes.

Rather than the current, traditional model of instruction, this proposal for ALS Ph.D. related classes suggests a hybrid structure that permits face-to face instruction blended with technology facilitated learning that allow for greater flexibility and student support throughout the full 3 years of coursework for those faculty who wish to teach this way, for both Harrisburg and Indiana sites.

Each model either maintains 42 hours podium-based instruction while reducing travel costs, OR reduces podium-based time by half, and augments that with distance education. Proposed variability models, faculty implications, and student implications are listed in the tables below.

NEW COURSE

Course: LDRS 803

Rationale: This new course proposal reflects the current state of faculty resources and student needs for the program. The deletion of LDRS 800 and LDRS 900 will be made simultaneously with the development of the newly-proposed course LDRS 803, which will facilitate a complementary shift and enhancement of the curriculum. This shift in curriculum reflects the need to assist student adjustment to scholarly writing earlier in the program.

Summary:

Course Title	Scholarly Writing in Leadership Studies
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	None
Catalog Description	Focuses on scholarly writing and communication for students of Leadership Studies. Students will review the mechanics of dissertation proposal writing, writing social scientific papers, and preparing reports and presentations. Students will learn how to synthesize research literature, develop conceptual frameworks, present data, and persuasively argue based on evidence. Students will learn and practice skills for writing, editing, and revision. Coverage includes writing for dissertation,

	applied research projects, and practical applications within the discipline.
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NEW COURSE

Course: LDRS 830

Rationale: LDRS 830 Diversity, Equity, and Inclusion in Organizations addresses the need to train and equip future leaders with the skills and issues for addressing diversity, equity, and inclusion. This need is growing as many private, non-profit, and public sector institutions are making verbal and financial commitments to diversity, equity, and inclusion efforts in their organizations. The course also aligns perfectly with IUP's current goals for increasing DEI initiatives on campus.

Summary:

Course Title	Diversity, Equity, and Inclusion in Organizations
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	None
Catalog Description	Examines the role of diversity and equity in organizations within the US context. It will provide students with an introduction to the interlocking systems of oppression and social inequalities (racism, sexism, heterosexism, ableism, classism, etc.) that shape social interactions, organizational culture, and social institutions, historically and today. The course will examine the effects of leadership practices on organizational cultures around inclusion and equity, and will draw on the latest theoretical and empirical research as well as case studies and personal accounts to evaluate how workplace inclusion strategies can contribute to positive outcomes for employers, employees, and their families and other stakeholders.

NEW COURSE

Course: LDRS 866

Rationale: LDRS 866, Advanced Qualitative & Mixed Methods is being proposed to address the increasing need for training among doctoral students in the ALS Ph.D. program planning to develop a dissertation using an advanced qualitative or mixed-methods approach.

Summary:

Course Title	Advanced Qualitative & Mixed Methods
Number of Credits	Class Hours per Week:3 Lab Hours:0

	Credits:3
Prerequisites	None
Catalog Description	Examines critical elements of qualitative research methodology in five substantive areas. First, it explores in-depth issues related to the ethical practice of qualitative research, and the institutional and regulatory processes in place for the protection of human subjects. Then, the course looks at elements of research design and implementation in depth. This begins with the historical emergence and epistemological grounding, the design and implementation of mixed methods research, and the case study and grounded theory research designs. Students will then further develop their skills in data collection via focus groups and multimedia sources, and in qualitative data analysis with focus on use of CAQDAS. Lastly, students will examine the writing process for preparing a qualitative dissertation, including organization, structure, and voice.

COURSE REVISION

Course: LDRS 804

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Prefix: SOC	Proposed Prefix: LDRS
Current Course Title: Social Policy	Proposed Course Title: Social Policy
Current Prerequisite(s): None	Proposed Prerequisite(s): None

COURSE REVISION

Course: LDRS 815

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Prefix: SOC	Proposed Prefix: LDRS
Current Number: 802	Proposed Number: 815
Current Course Title: Classical Social and Organizational Theories	Proposed Course Title: Survey of Social and Organizational Theories I
Current Prerequisite(s): None	Proposed Prerequisite(s): None
Current Catalog Description: Examines the use of classical social and organizational theories for understanding social relations and phenomena, the role of theory in the social sciences, and the historical roots and the development of both classical social theories and foundational applied organizational theories. The emphasis is on understanding the contributions and limitations of these theories, how they inform current understanding of societal relations, and critically analyzing these theoretical perspectives.	Proposed Catalog Description: Examines the principles and use of classical social and organizational theories for understanding social relations and phenomena, the role of theory in the social science of leadership studies, and the historical roots and the development of both social theories and organizational theories. The emphasis is on understanding the contributions and limitations of theory, how they inform current understanding of societal relations, and critically analyzing these theoretical perspectives.

COURSE REVISION

Course: LDRS 816

Rationale: The need for changing course designations reflects the new status of the program. It will also permit recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC related courses serving the ALS Ph.D. program and replacing with the LDRS designation are reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Prefix: SOC	Proposed Prefix: LDRS
Current Number: 803	Proposed Number: 816

<p>Current Course Title: Contemporary Social and Organization Theories</p> <p>Current Prerequisite(s): SOC 802 - Classical Social and Organizational Theories</p> <p>Current Catalog Description: Examines the use of contemporary and developing social and organizational theories for understanding social phenomena, the role of contemporary theories in the social sciences, and their relationship with classical social and organizational theories. The emphasis is on understanding the contributions and limitations of these theories, how they inform current understanding of societal relationships, their use in research, and critically analyzing these theoretical perspectives.</p>	<p>Proposed Course Title: Survey of Social and Organization Theories II</p> <p>Proposed Prerequisite(s): LDRS 815 - Survey of Social and Organizational Theories I; or instructor permission</p> <p>Proposed Catalog Description: Examines the use of contemporary and developing social and organizational theories for understanding social phenomena, the role of contemporary theories in the social sciences, and their relationship with classical social and organizational theories. The emphasis is on understanding the contributions and limitations of these theories, how they inform current understanding of societal relationships, their use in research, and critically analyzing these theoretical perspectives.</p>
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COURSE REVISION

Course: LDRS 861

Rationale: The course SLOs are revised to reflect changes in the course over time. The addition of DE reflects the changing student demands for more DE course offerings in the ALS PhD program.

Summary:

Current SLOs	Proposed SLOs
<ol style="list-style-type: none"> 1. have developed a thorough grasp of evaluation constructs enabling the discernment of differences and interrelationships among planning, program evaluation, applied research, and implementation improvement. 2. have acquired the necessary skills 	<ol style="list-style-type: none"> 1. Analyze the contributions of major evaluation theorists in terms of their relative choices regarding paradigms, values and use, and the implications these choices have for various stakeholder audiences. 2. Apply an understanding of larger political, administrative, and

<p>and knowledge to adequately design, successfully execute, and appropriately interpret and critique evaluations.</p> <ol style="list-style-type: none"> 3. be able to report and communicate evaluation needs, requirements and results to a wide variety of audiences. 4. have developed a sensitivity toward the larger political, administrative, and ethical issues of evaluation. 5. be able to identify the organizational context of a program evaluation. 6. have the necessary knowledge to effectively use qualitative and quantitative methods within the context of program evaluation. 	<p>ethical issues common to evaluation in a given context.</p> <ol style="list-style-type: none"> 3. Critique evaluation design in terms of its cultural responsiveness and awareness of its own cultural location and privilege 4. Synthesize program evaluation constructs, context, and stakeholder processes that impact evaluation use. 5. Demonstrate knowledge of appropriate and effective research design methods within the context of program evaluation. 6. Facilitate communication of evaluation needs, requirements and results to a wide variety of audiences.
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COURSE REVISION

Course: LDRS 862

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

<p>Current Prefix: SOC</p> <p>Current Catalog Description: Introduces students to statistics and their use in analyzing and understanding social phenomena and social data. In particular, helps students develop the skills and knowledge needed to conduct their own quantitative research, both as graduate students and as professionals, and to better understand and critique research which students come across in their work. By the end of the course, students will have an understanding of the concepts underlying the use of statistics, the ability to critique and</p>	<p>Proposed Prefix: LDRS</p> <p>Proposed Catalog Description: Introduces students to statistics and their use in analyzing and understanding social phenomena and social data germane to administration and leadership studies in the non-profit and public sectors. In particular, helps students develop the skills and knowledge needed to conduct their own quantitative research, both as graduate students and as professionals, and to better understand and critique research which students come across in their work. By the</p>
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question statistics they encounter in daily life, the ability to use professional statistical software (such as SPSS) comfortably, and the ability to use many different statistical techniques in their own research. Course will also provide a foundation for learning more advanced statistics.	end of the course, students will have an understanding of the concepts underlying the use of statistics, the ability to critique and question statistics they encounter in daily life, the ability to use professional statistical software comfortably, and the ability to use many different statistical techniques in their own research. Course will also provide a foundation for learning more advanced statistics.
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COURSE REVISION

Course: LDRS 864

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Course Title: Quantitative Research Methods II	Proposed Course Title: Quantitative Research Methods II
Current Prerequisite(s): None	Proposed Prerequisite(s): Prerequisite: LDRS 863 - Quantitative Research Methods I; or instructor permission

COURSE REVISION

Course: LDRS 863

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Prefix: SOC	Proposed Prefix: LDRS
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Current Course Title: Quantitative Research Methods I	Proposed Course Title: Quantitative Research Methods I
Current Prerequisite(s): None	Proposed Prerequisite(s): None

COURSE REVISION

Course: LDRS 865

Rationale: The need for changing course designations reflects the new status of the program. It will also permit the recruitment and retention of qualified faculty to teach ALS Ph.D. courses under the LDRS heading. An agreement for removing course designations from SOC-related courses serving the ALS Ph.D. program and replacing them with the LDRS designation is reflected in the minutes of the Sociology Department faculty meeting on July 2nd, 2020.

Summary:

Current Prefix: SOC	Proposed Prefix: LDRS
Current Course Title: Qualitative Research Methods	Proposed Course Title: Qualitative Research Methods
Current Prerequisite(s): None	Proposed Prerequisite(s): Prerequisite: LDRS 862 - Analysis of Social Data; or instructor permission
Current Catalog Description: Qualitative research represents one main branch of social inquiry into the human experience. This course will provide students with a solid understanding of the key principles associated with qualitative research, as well as a framework for understanding how this approach compares with quantitative research. Particular emphasis will be placed on the philosophical, social, and ethical dimensions of assuring quality and credibility in social inquiry and the resulting methodological implications. The course also offers an overview of the various types of qualitative research, such as case study, ethnography, phenomenological study, and grounded theory. Against this background, students will develop skills in the specific methods associated with qualitative research	Proposed Catalog Description: Provide students with a solid understanding of the key principles associated with qualitative research germane to administration and leadership studies in the non-profit and public sectors, as well as a framework for understanding how this approach compares with quantitative research. Against this background, students will develop skills in the specific methods associated with qualitative research design, including sampling, data-gathering, data analysis, representation, and assurance of quality. Students will experience the range of skills involved through actually designing, conducting, and reporting on a small qualitative study.

<p>design, including sampling, data-gathering, data analysis, representation, and assurance of quality. Students will experience the range of skills involved through actually designing, conducting, and reporting on a small qualitative study.</p>	
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6. Department: MATHEMATICAL AND COMPUTER SCIENCES

PROGRAM REVISION

APSCUF Rep Council approved

Program: Mathematics Education, MEd

Rationale: The program is being revised to remove GSR 615 as a program requirement. MAED 660 Survey of Research in Mathematics Education is being moved into Category I Education and Education Research and an additional 3 credits can be chosen from the EDEX/EDSP listing of courses as an elective. MATH 650 is being added to Category IV Option II. This course had accidentally been omitted in a recent revision of the program.

Summary:

Current Program	Proposed Program
<p>MEd in Mathematics Education</p> <p>I. Education and Educational Research (6 cr.)</p> <p>• GSR 615 – Elements of Research Credits: 3</p> <p>One course from:</p> <ul style="list-style-type: none"> • EDEX 569 - Education of Persons with Emotional/Behavioral Disorders, Learning Disabilities, or Brain Injury Credits: 3 • EDEX 578 - Education of Persons with Intellectual/Developmental Disabilities and Physical/Multiple Disabilities Credits: 3 • EDEX 650 - Exceptional Children and Youth Credits: 3 • EDEX 750 - Assessment for Instructional Planning for Students with Autism Spectrum Disorders Credits: 3 	<p>MEd in Mathematics Education</p> <p>I. Education and Educational Research (6 cr.)</p> <p>MAED 660 - Survey of Research in Mathematics Education Credits: 3</p> <p>One course from:</p> <ul style="list-style-type: none"> • EDEX 569 - Education of Persons with Emotional/Behavioral Disorders, Learning Disabilities, or Brain Injury Credits: 3 • EDEX 578 - Education of Persons with Intellectual/Developmental Disabilities and Physical/Multiple Disabilities Credits: 3 • EDEX 650 - Exceptional Children and Youth Credits: 3 • EDEX 750 - Assessment for Instructional Planning for Students with Autism Spectrum Disorders Credits: 3

- EDEX 751 - Instructional Interventions and Methods for Students with Autism Spectrum Disorder Credits: 3
- EDEX 752 - Assessment of Persons with Disabilities Credits: 3
- EDSP 577 - Assessment of Student Learning Credits: 3
- EDSP 704 - Advanced Educational Psychology Credits: 3
- EDSP 746 - Learning and Instruction Credits: 3
- EDSP 747 - Psychology of Human Development Credits: 3
- EDSP 748 - Advanced Studies in Behavioral Problems Credits: 3

II. Mathematics Education Core (~~12 cr.~~)

- MAED 650 - Curriculum and Instruction in Mathematics Education Credits: 3
- MAED 652 - Differentiated Instruction in Mathematics Education Credits: 3
- MAED 654 - Teaching of Problem Solving in Mathematics Education Credits: 3
- MAED 660 - Survey of Research in Mathematics Education Credits: 3

III. Mathematics Education Electives (~~6 cr.~~)

- Select two courses from:
- MAED 559 - Technology-Related Topics in Mathematics Credits: 3
- MAED 618: Mathematics and Cognition: 3
- MAED 616 - Writing in Mathematics Education Credits: 3
- MAED 681 - Special Topics Credits: 3
- MAED 698 – Supervised Internship: 3
- MAED 795 - Thesis Credits: 3
- A course from Category IV Credits: 3

IV. Mathematics Education Content (12 cr)
 Students in the Elementary and Middle Level Specialization select from Option I. Students in the Secondary Mathematics Specialization select from Option II.
 Option I

- EDEX 751 - Instructional Interventions and Methods for Students with Autism Spectrum Disorder Credits: 3
- EDEX 752 - Assessment of Persons with Disabilities Credits: 3
- EDSP 577 - Assessment of Student Learning Credits: 3
- EDSP 704 - Advanced Educational Psychology Credits: 3
- EDSP 746 - Learning and Instruction Credits: 3
- EDSP 747 - Psychology of Human Development Credits: 3
- EDSP 748 - Advanced Studies in Behavioral Problems Credits: 3

II. Mathematics Education Core (9 cr.)

- MAED 650 - Curriculum and Instruction in Mathematics Education Credits: 3
- MAED 652 - Differentiated Instruction in Mathematics Education Credits: 3
- MAED 654 - Teaching of Problem Solving in Mathematics Education Credits: 3
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III. Mathematics Education Electives (9 cr.)

- Select two courses from:
- MAED 559 - Technology-Related Topics in Mathematics Credits: 3
- MAED 618: Mathematics and Cognition: 3
- MAED 616 - Writing in Mathematics Education Credits: 3
- MAED 681 - Special Topics Credits: 3
- MAED 698 – Supervised Internship: 3
- MAED 795 - Thesis Credits: 3
- A course from Category I or Category IV Credits: 3

IV. Mathematics Education Content (12 cr)
 Students in the Elementary and Middle Level Specialization select from Option I. Students in the Secondary Mathematics Specialization select from Option II.
 Option I

<ul style="list-style-type: none"> • MAED 517 - Probability and Statistics for Elementary/Middle Level Teachers Credits: 3 • MAED 520 - Patterns and Functions for Elementary/Middle Level Teachers Credits: 3 • MAED 556 - Geometry for Elementary/Middle Level Teachers Credits: 3 • MAED 561 - Discrete Mathematics for Elementary/Middle Level Teachers Credits: 3 • MAED 571 - Algebra for Elementary/Middle Level Teachers Credits: 3 • MAED 617 - Teaching Proportional Reasoning Credits: 3 <p>Option II</p> <ul style="list-style-type: none"> • MAED 611 - Algebra for Secondary Teachers Credits: 3 • MAED 612 - Geometry for Secondary Teachers Credits: 3 • MAED 613 - Probability and Statistics for Secondary Teachers Credits: 3 • MAED 614 - Pre-calculus and Discrete Math for Secondary Teachers Credits: 3 • MAED 617 - Teaching Proportional Reasoning Credits: 3 <p>Total 36 cr.</p>	<ul style="list-style-type: none"> • MAED 517 - Probability and Statistics for Elementary/Middle Level Teachers Credits: 3 • MAED 520 - Patterns and Functions for Elementary/Middle Level Teachers Credits: 3 • MAED 556 - Geometry for Elementary/Middle Level Teachers Credits: 3 • MAED 561 - Discrete Mathematics for Elementary/Middle Level Teachers Credits: 3 • MAED 571 - Algebra for Elementary/Middle Level Teachers Credits: 3 • MAED 617 - Teaching Proportional Reasoning Credits: 3 <p>Option II</p> <ul style="list-style-type: none"> • MAED 611 - Algebra for Secondary Teachers Credits: 3 • MAED 612 - Geometry for Secondary Teachers Credits: 3 • MAED 613 - Probability and Statistics for Secondary Teachers Credits: 3 • MAED 614 - Pre-calculus and Discrete Math for Secondary Teachers Credits: 3 • MAED 617 - Teaching Proportional Reasoning Credits: 3 • MATH 650 – Themes in the History of Mathematics Credits 3 <p>Total 36 cr.</p>
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NEW SPECIALIZATIONS

Specialization Title: M.S. in Applied Mathematics Specialization in Community College Instruction

Rationale: Resulting from the INSPIRE phase one review process, it was recommended that the M.S. in Applied Mathematics Community College Track not be continued as a separate PASSHE CIP code tracked program. This proposal is to fold M.S. in Applied Mathematics Community College Track into a specialization under the existing M.S. in Applied Mathematics Program.

In recruiting for the M.S. in Applied Mathematics program we found an opportunity to serve those who are intending to hold full-time positions as instructors at Pennsylvania community colleges. These faculty must have a master's degree with at least 18 graduate credits in the discipline they teach. Students in this specialization will receive a master's degree in Applied Mathematics while also learning valuable teaching techniques, setting them on a path to success.

Summary:

<p>Catalog Description</p>	<p>The M.S. in Applied Mathematics Specialization in Community College Instruction combines the practical focus of the Applied Mathematics program with an emphasis on teaching the techniques necessary to succeed as a faculty member in two-year higher education institutions.</p> <p>Instructors at Pennsylvania community colleges must have a master's degree with at least 18 graduate credits in the discipline they teach. Students in this specialization will receive a master's degree in Applied Mathematics while also learning valuable teaching techniques, setting them on a path to success.</p> <p>The MS program in Applied Mathematics is designed to produce graduates who are marketable in industry, government, and education. The program is also appropriate for professionals who wish to add to their skills and for secondary mathematics and science teachers who wish to gain a deeper understanding of how mathematics and statistics can be used to solve applied problems. It also provides a solid background for those planning to enter a PhD program.</p>
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Current	Proposed
M.S in Applied Mathematics – Community College Track	M.S in Applied Mathematics – Specialization for Community College Instruction
<p>I. Core Courses (15 cr.) (Same as the MS in Applied Mathematics) MATH 545 Deterministic Models in Operation Research (3 cr.) MATH 546 Probabilistic Models in Operation Research (3 cr.) MATH 563 Mathematical Statistics I (3 cr.) MATH 564 Mathematical Statistics II (3 cr.) MATH 625 Analysis for Applied Mathematics (3 cr.)</p>	<p>I. Core Courses* (15 cr.) (Same as the MS in Applied Mathematics) *Required unless comparable courses have been taken at the undergraduate level. (No more than 3 cr. may be waived from the total of 30 cr. of coursework.) MATH 545 Deterministic Models in Operation Research (3 cr.) MATH 546 Probabilistic Models in Operation Research (3 cr.) MATH 563 Mathematical Statistics I (3 cr.) MATH 564 Mathematical Statistics II (3 cr.)</p>

	MATH 625 Analysis for Applied Mathematics (3 cr.)
<p>II. Controlled Electives (15 cr.)</p> <p>Choose two courses (6cr.):</p> <p>MATH 611 Algebra for Secondary Teachers (3 cr.)</p> <p>MATH 613 Probability and Statistics for Secondary Teachers (3 cr.)</p> <p>MATH 614 Pre-calculus and Discrete Math for Secondary Teachers (3 cr.)</p> <p>MATH 654 Teaching of Problem Solving in Mathematics Education (3 cr.)</p> <p>Choose two courses (6cr.):</p> <p>MATH 640 Numerical Mathematics (3 cr.).</p> <p>MATH 641 Ordinary and Partial Differential Equations (3 cr.)</p> <p>MATH 643 Graphs, Networks, and Combinatorics (3 cr.)</p> <p>MATH 645 Nonlinear Programming Models (3 cr.)</p> <p>MATH 665 Applied Regression Analysis and Design of Experiments (3 cr.)</p> <p>MATH 667 Applied Statistics Methods (3 cr.)</p> <p>Choose one course (3cr.):</p> <p>MATH 521 Advanced Calculus I (3 cr.)</p> <p>MATH 523 Complex Variables (3 cr.)</p> <p>MATH 527 Topology (3 cr.)</p> <p>MATH 553 Theory of Numbers (3 cr.)</p> <p>MATH 576 Abstract Algebra I (3 cr.)</p>	<p>III. Controlled Electives (15 cr.)</p> <p>Choose two courses (6cr.):</p> <p>MAED 611 Algebra for Secondary Teachers (3 cr.)</p> <p>MAED 613 Probability and Statistics for Secondary Teachers (3 cr.)</p> <p>MAED 614 Pre-calculus and Discrete Math for Secondary Teachers (3 cr.)</p> <p>MAED 654 Teaching of Problem Solving in Mathematics Education (3 cr.)</p> <p>Choose two courses (6cr.):</p> <p>MATH 640 Numerical Mathematics (3 cr.).</p> <p>MATH 641 Ordinary and Partial Differential Equations (3 cr.)</p> <p>MATH 643 Graphs, Networks, and Combinatorics (3 cr.)</p> <p>MATH 645 Nonlinear Programming Models (3 cr.)</p> <p>MATH 665 Applied Regression Analysis and Design of Experiments (3 cr.)</p> <p>MATH 667 Applied Statistics Methods (3 cr.)</p> <p>Choose one course (3cr.):</p> <p>MATH 521 Advanced Calculus I (3 cr.)</p> <p>MATH 523 Complex Variables (3 cr.)</p> <p>MATH 527 Topology (3 cr.)</p> <p>MATH 553 Theory of Numbers (3 cr.)</p> <p>MATH 576 Abstract Algebra I (3 cr.)</p>
<p>III. Research Requirements (3-6 cr.)</p> <p>Option I</p> <p> MATH 795 Thesis (3 cr.)</p> <p>Option II</p> <p> MATH 698 - Internship (6 cr.)</p> <p style="text-align: right;">Total 33-36 cr.</p>	<p>III. Research Requirements (3-6 cr.)</p> <p>Option I</p> <p> MATH 795 Thesis (3 cr.)</p> <p>Option II</p> <p> MATH 698 - Internship (6 cr.)</p> <p style="text-align: right;">Total 33-36 cr.</p>

NEW SPECIALIZATION

Specialization: M.S. - Applied Mathematics/Specialization in Data Science

Rationale: This specialization of the M.S. in Applied Mathematics program combines two courses in data science with the core coursework spanning applied mathematics. In the last 5 years many of the graduates from the M.S. in Applied Mathematics have been taken career positions associated with data science. Feedback from our alumni is that their graduate training has provided a significant background in the areas of statistics, modeling, optimization, and computing; but that additional training in database, query optimization, data visualization, and data analytics would help future graduates taking similar career positions.

Additionally, IUP Admissions studied areas of increasing student interest for possible growth in recruitment opportunities-- as data science is one of the fastest rapidly growing career areas, it is likely to attract more students to IUP. This is also an INSPIRE-related program modification.

Summary:

Catalog Description	<p>The MS program in Applied Mathematics is designed to produce graduates who are marketable in industry, government, and education. The Data Science Specialization provides the opportunity to gain skills on designing, analyzing, and utilizing complex databases to provide real world, real-time solutions that incorporate predictive analytics and forecasting to improve decision making. The program is also appropriate for professionals who wish to add to their skills and for secondary mathematics and science teachers who wish to gain a deeper understanding of how mathematics and statistics can be used to solve applied problems. It also provides a solid background for those planning to enter a PhD program.</p> <p>Faculty members offer courses in the areas of traditional applied mathematics, operations research, computer science and statistics. The department houses its own computer facilities with which faculty and students engage in activities such as simulation and statistical analysis. Students utilize quantitative modeling techniques, including probability, statistics, optimization, and simulation, to the solution of data-driven, real-world</p>
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	problems. Most classes are offered at times convenient for nontraditional students who wish to advance their careers in applied mathematics, secondary education, or statistics. Students have the option of writing a thesis or participating in an internship.
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Current	Proposed
M.S in Applied Mathematics	M.S in Applied Mathematics – Specialization for Data Science
<p>II. Core Courses (15 cr.) *Required unless comparable courses have been taken at the undergraduate level. (No more than 3 cr. may be waived from the total of 30 cr. of coursework.) MATH 545 Deterministic Models in Operation Research (3 cr.) MATH 546 Probabilistic Models in Operation Research (3 cr.) MATH 563 Mathematical Statistics I (3 cr.) MATH 564 Mathematical Statistics II (3 cr.) MATH 625 Analysis for Applied Mathematics (3 cr.)</p>	<p>I. Core Courses (21 cr.) *Required unless comparable courses have been taken at the undergraduate level. (No more than 3 cr. may be waived from the total of 30 cr. of coursework.) MATH 516 Data Science Fundamentals (3 cr.) MATH 545 Deterministic Models in Operation Research (3 cr.) MATH 546 Probabilistic Models in Operation Research (3 cr.) MATH 563 Mathematical Statistics I (3 cr.) MATH 564 Mathematical Statistics II (3 cr.) MATH 618 Data Science Theory & Application (3 cr.) MATH 625 Analysis for Applied Mathematics (3 cr.)</p>
<p>III. Controlled Electives (15 cr.) † At least 12 cr. must be at the 600 level.</p> <p>MATH 523 Complex Variables I (3 cr.) MATH 547 Modeling and Simulation (3 cr.) MATH 551 Numerical Methods for Supercomputers (3 cr.) MATH 640 Numerical Mathematics (3 cr.) MATH 641 Ordinary and Partial Differential Equations (3 cr.) MATH 643 Graphs, Networks, and Combinatorics (3 cr.) MATH 645 Nonlinear Programming Models (3 cr.) MATH 647 Advanced Simulation (3 cr.) MATH 665 Applied Regression Analysis and Design of Experiments (3 cr.) MATH 667 Applied Statistical Methods (3 cr.)</p> <p>III. Additional Electives† Other graduate-level mathematics courses may be selected with the approval of the student’s advisor. Also, with the advisor’s approval, up to six credit hours of graduate work may be taken in disciplines such as</p>	<p>II. Controlled Electives (9 cr.) † At least 9 cr. must be at the 600 level. ** Data Science focused students should consider selecting MATH 665 and 667, and one of MATH 645, and/or 647 MATH 523 Complex Variables I (3 cr.) MATH 547 Modeling and Simulation (3 cr.) MATH 551 Numerical Methods for Supercomputers (3 cr.) MATH 640 Numerical Mathematics (3 cr.) MATH 641 Ordinary and Partial Differential Equations (3 cr.) MATH 643 Graphs, Networks, and Combinatorics (3 cr.) MATH 645 Nonlinear Programming Models (3 cr.) MATH 647 Advanced Simulation (3 cr.) MATH 665 Applied Regression Analysis and Design of Experiments (3 cr.) MATH 667 Applied Statistical Methods (3 cr.)</p> <p>III. Additional Electives† Other graduate-level mathematics courses may be selected with the approval of the student’s advisor. Also, with the advisor’s approval, up to six credit hours of graduate work may be taken in disciplines such as</p>

chemistry, computer science, economics, finance, management information systems, and physics. ‡ The MS in Applied Mathematics requires a minimum of 27 cr. of course work in addition to the research requirement listed below.	chemistry, computer science, economics, finance, management information systems, and physics. ‡ The MS in Applied Mathematics requires a minimum of 27 cr. of course work in addition to the research requirement listed below.
IV. Research Requirements (3-6 cr.) Option I MATH 795 Thesis (3 cr.) Option II MATH 698 Internship (6 cr.) Total 33-36 cr.	III. Research Requirements (3-6 cr.) Option I MATH 795 Thesis (3 cr.) Option II MATH 698 Internship (6 cr.) Total 33-36 cr.

NEW COURSE

Course: MATH 548

Rationale: The financial industry has become one of largest industries that hire people with quantitative skills. This course is developed to provide students with a rigorous financial mathematics background to enter the industry. It will be offered as an elective course for students who are interested in pursuing career in actuarial or quantitative finance. The majority of course content is based on Society of Actuaries (SOA) Exam Financial Mathematics, which is a required professional exam for anyone who is pursuing credentials from the SOA and the Casualty Actuarial Society.

Summary:

Course Title	Financial Mathematics
Number of Credits	Class Hours per Week:3 Lab Hours:0 Credits:3
Prerequisites	None
Catalog Description	Provides a rigorous mathematical treatment of the theory associated with financial transactions is undertaken in this course. Geometric series and other concepts are used to construct mathematical models for analytically pricing various financial securities based on the time value of money. The course studies how to construct mathematical models for pricing cash flows and explores the equivalency of different cash flows. Topics include a detailed study of interest theory and financial economics. This course prepares students for the Society of Actuaries Financial Mathematics (FM) exam.

DUAL-LIST

Course: MATH 448 plus 548

Rationale: Most of graduate students in the M.S in Applied Mathematics program don't have any accounting or finance background and undergraduates who are in the actuarial science track have taken economics, introduction to accounting and finance courses prior to this course. By putting two groups together, graduate students can share their knowledge in mathematical modeling/analysis and undergraduate students can provide their understanding on aspects of accounting and finance. One goal of this course is to help students pass the Financial Mathematics exam hosted by the Society of Actuaries (SOA), which is a requirement for any professional credentials from both SOA and Casualty Actuarial Society. Having those students who are interested in actuary career working together will enhance students' persistency in preparing and passing actuary exams.

NEW COURSE

Course: MATH 516

Rationale: This course is part of the M.S. in Applied Mathematics, Data Science track. Data science is one of the fastest growing career areas and IUP administration has requested that this track and coursework be created. This is an INSPIRE-related program modification. Students in other degree programs who meet pre-requisites may be interested in taking this course as many career areas can utilize data science concepts.

Summary:

Course Title	Data Science Theory & Application
Number of Credits	Class Hours per Week: 3 Lab Hours: 0 Credits: 3
Prerequisites	Introductory statistics course, introductory computer programming course, and database management course.
Catalog Description	Introduces the field of data science by covering the methodology in which data-intensive problems are identified, defined, and solved. Investigates data analysis and data mining techniques for finding patterns in data that emphasize using data models, data gathering and storage, selection and preparing of data, model building and testing, and interpreting and validating results. Utilizes hands-on experiences with data science tools and techniques, specific topics include map-reduce and mining data streams. Includes techniques for visualizing patterns in data, including interactive visualization

NEW COURSE

Course: MATH 618

Rationale: This course is part of the M.S. in Applied Mathematics, Data Science track. Data science is one of the fastest growing career areas and IUP administration has requested that this track and coursework be created. This is an INSPIRE-related program modification.

Summary:

Course Title	Data Science Theory & Application
Number of Credits	Class Hours per Week: 3 Lab Hours: 0 Credits: 3
Prerequisites	MATH 516
Catalog Description	Covers acquiring, managing, and analyzing massive unstructured data. Includes theoretical analysis of clustering, visualization, link analysis, recommendation systems, mining social network graphs, dimensionality reduction with PCA and SVD, large-scale machine learning, neural nets and deep learning, distributed file systems, incremental data processing with Hadoop, NoSQL databases, cloud computing, and data security issues. Applications in web advertising, business, engineering, health care and social networks will also be covered. Implements a computational project utilizing machine learning and artificial intelligence techniques that includes theoretical analysis of a large-scale, data-driven model.

7. DEPARTMENT: MARKETING

APSCUF Rep Council approved

NEW COURSE

Course: MKTG 536

Rationale: Retail and omnichannel management provides comprehensive coverage of all retail channels and customer contact points. This course serves as a functional area elective within the Marketing and Supply Chain Management concentrations in the MBA program. The training exposes students to the seamless retail chain through an integrated customer experience.

Utilizing applied pedagogy tools like exercises, simulations, and case analysis, along with the value added perspective of electronic advancements to manage the retail process, will facilitate applications based learning and rigor.

Summary:

Course Title	Retail and Omnichannel Management
Number of Credits	Class Hours per Week:3 Lab Hours:0

	Credits:3
Prerequisites	MKTG 320 Principles of Marketing or MKTG 603 Marketing Management
Catalog Description	Introduces retailing and omnichannel management including the synergistic optimization of all retail channels and customer touchpoints for an integrated customer retail experience.

**8. DEPARTMENT: PROFESSIONAL STUDIES IN EDUCATION
NEW SPECIALIZATION IN M.Ed. INSTRUCTION AND LEARNING**

APSCUF Rep Council approved

Specialization Title: Instruction and Learning

Rationale: School districts across the United States are now requiring teachers to earn a master’s degree within five-years of entering the profession (<http://www.usnews.com/education/online-education>). In Pennsylvania, Act 48 of 1999 requires all Pennsylvania educators who have been issued an initial certification to earn up to 180 hours of professional development every five years (Pennsylvania Department of Education [PDE], 2014). At the same time, the need for teachers is growing. The Occupational Outlook Handbook reports that employment of teachers is expected to grow by 13% over the next decade (or an estimated 500,000 new teachers entering the field; OOH, 2018). Beginning in 2019, these more than 500,000 teachers will be in their first-years as educators and actively seeking opportunities to earn advanced credits and degrees.

Evidence also shows that the majority of teachers who are pursuing masters and advanced certification degrees in education want to do so online (Christensen, Rossi, Tinning, 2018). In response, the Department of Professional Studies has revised the program to offer our M.Ed. in Education program entirely online, to meet consumer demand for flexibility; moreover, the M.Ed. in Education, Instruction and Learning specialization will help K-12 educators and other professionals enhance their professional skills and increase their wages.

Summary:

Catalog Description	<p>The 30-credit M.Ed. in Education, Instruction and Learning, specialization is designed for K-12 teachers and other professionals who are seeking an advanced degree in education. Coursework will target human learning and development, the effective implementation of educational technologies, working with diverse populations of learners, assessment and assessment-informed instruction, and school law and negotiations.</p> <p>This program is fully online and can be</p>
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	completed in an academic year (i.e., Fall, Spring, and Summer).
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The M.Ed. in Education, Instruction and Learning specialization is organized around two sets of courses: (a) Core, and (b) Controlled Electives.

Core (15 credits)	Credits
MEDU 761: Connecting Community and School	3
MEDU 762: Teaching Academically Diverse Learners	3
MEDU 763: Educational Research and Practical Application	
*GSR 615: Elements of Research (replacement)	3
*LTCY 698: Analysis of Research in Literacy (replacement)	
MEDU 764: Education Technology for Today and Tomorrow	3
MEDU 765: Curriculum, Assessment, and Reflection	3
Controlled Electives (15 credits)	
Human Learning and Development	3
EDSP 747: Psychology of Human Development	
CURR 910: Advanced Topics in Human Development & Learning	
ALS 810: Advanced Topics in Human Development & Learning	
Assessment	3
EDEX 752: Assessment of Persons with Disabilities	
EDSP 577: Assessment of Student Learning	
ALS 830: Analysis of Effective Instruction	
Instructional Design	3
ETIT 600: Introduction to Instructional Design	
ETIT 610: Learning Management Systems	
ETIT 617: Distance Education Technologies	
Literacy	3
LTCY 600: Foundations of Literacy Instruction	

LTCY 607: Diverse Texts for Literacy Instruction	
LTCY 644: Writing Development and Instruction	
LTCY 702: Literacy Instruction Across Disciplines	
Specialized Emphasis/Free Elective	3
ELR 751: Conflict Resolution	
ALS 825: Critical Analysis of Issues in Education	
CURR 925: Critical Analysis of Issues in Education	
FREE ELECTIVE: Pre-Approval by Advisor	
Total Credits	30

*Note. Students must complete all five core courses, and one 3-credit course under each of the five categories in the controlled electives: human learning and development, assessment, instructional design, literacy, and specialized emphasis area.

PROGRAM REVISION

Program: M.A. Education, Training, and Instructional Technology

Rationale: The program is being revised to change the research course requirement from ACE 754 Research and Trends in Instructional Design and Technology to allow students to take a different research course, such as GSR 615 or a different graduate level research course or an internship instead of ACE 745. This change is to allow for more flexibility for students and to provide the opportunity for them to select from different research courses or an internship to fit with their professional and academic needs.

Summary:

Education, Training, and Instructional Technology Program Requirements 2021-21

Current Requirements	Proposed Requirements
ACE 600 Intro to Instructional Design (3)	ACE 600 Intro to Instructional Design (3)
ACE 610 Learning Management Systems (3)	ACE 610 Learning Management Systems (3)
ACE 617 Education Technologies (3)	ACE 617 Education Technologies (3)

ACE 622 Program and Project Planning & Evaluation (3)	ACE 622 Program and Project Planning & Evaluation (3)
ACE 624 Designing Accessible and Inclusive Instruction (3)	ACE 624 Designing Accessible and Inclusive Instruction (3)
ACE 630 Digital Pedagogy (3)	ACE 630 Digital Pedagogy (3)
ACE 700 Advanced Instructional Design (3)	ACE 700 Advanced Instructional Design (3)
ACE 745 Research and Trends in Instructional Design and Technology (3)	ACE 745, GSR 615, or other graduate level research course as approved by advisor 3 credits Or ACE 698 Internship 3 credits
<p>Either</p> <p>A. Thesis Option 6 Credits ACE 795 Thesis</p> <p>B. Non-Thesis Option</p> <p>*A portfolio is required for non-thesis option students.</p> <p>§ ACE 698 Internship 0-6 credits</p> <p>§ Electives 0-6 (as approved by advisor)</p>	<p>Either</p> <p>A. Thesis Option 6 Credits ACE 795 Thesis</p> <p>B. Non-Thesis Option</p> <p>* A portfolio is required for non-thesis option students.</p> <p>§ ACE 698 Internship 0-6 credits</p> <p>§ Electives 0-6 (as approved by advisor)</p>
Total 30 Credits	Total 30 Credits

DEPARTMENT: Professional Studies in Education
COURSE REVISION
Course: ACE and IDT Courses to Change to ETIT

Rationale: Due to department and program changes over the past few years, a batch prefix change of all active ACE courses to ETIT is being requested to indicate their current disciplinary alignment.

Summary:

Current Prefix: ACE and IDT	Proposed Prefix: ETIT
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