NOVEMBER 2005 SENATE REPORT

This report was approved by the Faculty Senate at its November 14, 2005 meeting. Item 2 was approved at a special meeting of the Senate on November 7, 2005.

(Unless otherwise noted, course additions/changes/deletions take effect in Summer/Fall 2006; program changes/additions may take effect as early as Spring 2006.)

PLEASE NOTE THAT ITEMS 2d, 6p, AND 12a REQUIRE DEPARTMENT OF HIGHER EDUCATION APPROVAL.

1. Computer Electronics & Graphics Tech.:

a. course addition: :GRT 232 Introduction to 3D Animation Technology

Prerequisites: ETM 260 and (GRT 112 or MFG 121 or ETC 122). Wire frame modeling applications will be introduced. Topics include the creation of basic geometric shapes; editing the model structure; animating and rendering the animation. (lecture/lab). Fall (e). [c] 3 credits.

b. course addition::GRT 332 Advanced 3D Modeling & Animation Technology

Prerequisite: GRT 232. 2D and 3D animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion. (lecture/lab). Spring (o). [c] 3 credits.

c. course addition::GRT 432 Customization & Development in Animation Technology

Prerequisite: GRT 332. Advanced imaging, development, and documentation of 3D animation models. (lecture/lab). Fall(o). [c] 3 credits.

2. Engineering Technology:

a. course addition: :ME 345 Engineering Statistical Analysis of Operations

Prerequisite: MATH 228. Engineering probability and statistical techniques used to make inferences in experiments. Probability distributions. Tests of significance, hypothesis testing, simple linear regression, multiple regression models and ANOVA. Basics of factorial experiments, Taguchi quality techniques and SPC/SQC. Spring. 3 credits.

b. course addition: :ME 360 Manufacturing Operations analysis and Simulation

Prerequisite: ME 345. Planning and optimization of resources utilization, forecasting, scheduling and sequencing of activities, inventory and maintenance planning for JIT environment, automated production. Lean Manufacturing environment analysis and design. Analysis and simulation of production problems using computers. Fall. [c] 3 credits.

c. course addition: :ME 460 Manufacturing System Design

Prerequisite: ME 360. Analysis, synthesis and control of manufacturing operations. Group Technology and flexible manufacturing. Process design and tolerance control in discrete parts manufacturing. Analysis and design of Lean Manufacturing environment. Use of SPC/SQC and statistical methods. Spring. 3 credits.

d. Program addition: B.S., Mechanical Engineering

The Bachelor of Science in Mechanical Engineering is a program of study requiring 126-134 credits of undergraduate work including a two term senior project capstone requirement completed through oral and written reports. If desired, the candidate may also choose an appropriate sequence of elective courses for specialization in Manufacturing, or Aerospace.

Required coursework can be grouped into four categories: General Education, Major Requirements, Electives or Specialization Requirements, and Additional Requirements.

I. General Education: (42-49 total credits) NOTE: Distribution requirements are similar to the existing Engineering Technology General Education requirements.

Study Area I (L) (PHIL or FA) (L, PHIL or FA) 9

Study Area II (History) (Elective) 6

Study Area III (Elective) 3

Study Area IV (PHYS 125, PHYS 126) 8

Skill Area I (ENG 110, COMM 140) 6

Skill Area II (MATH 152, MATH 221) 8

Skill Area III 0-6

Skill Area IV (PE 244 or ENGR 150) 2-3

II. Major Requirements (34-37 credits): ENGR 150, ENGR 251, ENGR 252, ENGR 257, ME 216, ME 258, ME 345, ME 354, ME 367, ME 370, ME 454 ME 497, ME 498

III. Electives or Specialization Requirements (12 credits)

Electives - 3 ME Electives, 1 Tech Elective

Manufacturing – MFG 226, ME 360, ME 460, ME 466

Aerospace – ME 403, ME 480, ME 483, ME 486

IV. Additional Requirements (37 credits): CET 236, CHEM 121, CHEM 122, CS 151, ENG 403, ETM 260, ETM 356, ETM 467, MATH 222, MATH 228, MATH 463, and proof of 400 hours professional experience.

3. Physical Education :

a. course revision: PE 445 Internship in Athletic Training

Delete [G] credit.

Change prerequisites to: PE 319 and PE 440 and Admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry).

4. School of Arts & Sciences :

a. course addition: :FYE 101 First Year Experience

Prerequisite: First-year, First-time status. Students will discuss issues and learn about campus resources relevant to first-year students as they make the transition from high school to college learning environments. Sections of this course will be complementary to specific sections of designated first-year experience courses for which the student must register concurrently. 1 credit.

Add to catalog: TE110, ENGR150, and certain FYS courses designated as such at the time of their creation, are exceptions to requiring the additional FYE101 course.

b. course addition: :FYS 101 First Year Seminar

Prerequisite: First-year, First-time status. Must register for specified section of FYE 101 concurrently. Series of topical seminars in Arts and Humanities for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. 2-4 credits. Study Area I.

c. course addition: :FYS 102 First Year Seminar

Prerequisite: First-year, First-time status. Series of topical seminars in Social Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. Must register for specified section of FYE 101 concurrently. 2-4 credits. Study Area II.

d. course addition: :FYS 103 First Year Seminar

Prerequisite: First-year, First-time status. Must register for specified section of FYE 101 concurrently. Series of topical seminars in Behavioral Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. 2-4 credits. Study Area III.

e. course addition: :FYS 104 First Year Seminar

Prerequisite: First-year, First-time status. Must register for specified section of FYE 101 concurrently. Series of topical seminars in Natural Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. 2-4 credits. Study Area IV.

F. course addition: :FYS 105 First Year Seminar

Prerequisite: First-year, First-time status. Must register for specified section of FYE 101 concurrently.Series of topical seminars in Communication Skills for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. 2-4 credits. Skill Area I.

g. course addition: :FYS 106 First Year Seminar

Prerequisite: First-year, First-time status. Must register for specified section of FYE 101 concurrently. Series of topical seminars in Mathematics and Computer Science for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. 2-4 credits. Skill Area II.

b-g. Policy on FYS courses: All first-time offerings of FYS courses must be approved by the General Education subcommittee (only).

5. Counseling & Family Therapy:

a. course revision: :CNSL 501 Theories and Techniques in Counseling

Change prerequisites to: Admission to M.S. in Counselor Education or Marriage and Family Therapy.

b. course revision: :CNSL 525 Multicultural Counseling

Change prerequisite to: CNSL 501.

c. course revision: :CNSL 531 Student Services in Higher Education

Change prerequisites to: Admission to M.S. in Counselor Education or Marriage and Family Therapy.

d. Program revision::Counseling and Family Therapy -- Programs

Change name of specialization from: Professional Counseling to: Professional and Rehabilitation Counseling

6. Teacher Education :

MAT = Master Arts of Teaching

a) course addition: :MAT 551 Perspectives on Educational Policy and Practice

Prerequisites: Admission to the M.A.T. program; MAT 540 (C or better). Study of the contribution of philosophical, sociological and historical perspectives on American education today. Summer I. 3 credits.

b) course addition: :MAT 510 Research on Teaching Diverse Learners

Prerequisite: Admission to the M.A.T. program. Research based introduction to teaching, learning theory, classroom implications of developmental and diversity issues, and personal stance. Includes at least 15 hours of school day field experiences in assigned settings. Summer I. 5 credits.

c) course addition: :MAT 511 Introduction to Special Education

Prerequisite: Admission to the M.A.T. program. Introduction to basic concepts, legal issues, and terminology related to teaching special learners in the regular classroom. Satisfactory completion of exit examination is required to pass the course. Summer I. 1 credit.

d) course addition: :MAT 520 Design and Delivery of Instruction

Prerequisite: Admission to the M.A.T. program, and MAT 510 (C or better). Corequisite: MAT 529. Cross disciplinary study of design and delivery of instruction. Includes at least 45 hours of field experience in an assigned public school classroom, delivering lessons and observation by university instructor. Students must pass the field component to pass the course. Summer II. 4 credits.

e) course addition: :MAT 529 Content Pedagogy 1 in Certification Area: Mathematics, Science, Spanish, English, Technology or Special Education

Prerequisite: Admission to the M.A.T. program, and MAT 510 (C or better). Corequisite: MAT 520. Introduction to discipline specific standards, pedagogy, and assessment strategies. Taught in the certification area. Summer II. 3 credits.

f) course addition: :MAT 530 Meeting the Needs of Special Learners in the Classroom

Prerequisite: Admission to the M.A.T. program, and MAT 511 (C or better) and MAT 520 (C or better). Corequisite: MAT 533. Study of strategies for meeting the needs of special learners in the regular classroom, emphasizing differentiation of instruction, assessment and management. Fall. 3 credits.

g) course addition: :MAT 531 Literacy and Language Issues in the Classroom

Prerequisite: Admission to the M.A.T. program, and MAT 520 (C or better). Corequisite: MAT 533. Study of research, theory, and practice on developing literacy in content area classroom; differentiation to support struggling readers and writers; and strategies to support English language learners. Fall. 3 credits.

h) course addition: :MAT 532 Research I: Reading and Designing Educational Research

Prerequisite: Admission to the M.A.T. program. Corequisite: MAT 533. Develop ability to locate and critically read educational research; review literature; and design action research. This is the first half of the program capstone sequence (Plan E). Fall. 3 credits.

i) course addition: :MAT 533 Field Experience in the Certification Area: Mathematics, Science, Spanish, English, Technology or Special Education

Prerequisite: Admission to the M.A.T. program, MAT 520 (C or better) and MAT 529 (C or better). Corequisites: MAT 530, MAT 531, MAT 532, MAT 534, and MAT 539. Two days weekly supervised field experience in assigned public school certification area classroom. Focus on lesson planning, delivery, management and analysis of instruction. University supervisor observations and seminar. Fall. 3 credits.

j) course addition: :MAT 534 Creating Productive Learning Environments

Prerequisite: Admission to the M.A.T. program, and MAT 520 (C or better). Corequisite: MAT 533. Develop basic preventive management strategies, a repertoire of approaches to daily management of classroom behavior, skills in addressing chronic disciplinary problems, and a personal discipline plan congruent with school policies. Fall. 3 credits.

k) course addition: : MAT 539 Content Pedagogy in the Certification Area 2: Mathematics, Science, Spanish, English, Technology or Special Education

Prerequisite: Admission to the M.A.T. program, and MAT 520 (C or better) and MAT 529 (C or better). Corequisite: MAT 533. Continuation of study of discipline specific standards, pedagogy, and assessment strategies in the certification area. Taught in the certification area. Fall. 3 credits.

l) :course addition: :MAT 540 Internship in the Certification Area: Mathematics, Science, Spanish, English, Technology or Special Education

Prerequisite: Admission to the M.A.T. program; MAT 530, MAT 531, MAT 532, MAT 533, MAT 534, and MAT 539 (all with a C or better); 3.00 GPA (or better) in MAT program; and permission of department chair. Corequisites: MAT 541 and MAT 542. Sixteen week, full-time internship in assigned public school classroom, supervised by certified teacher. Gradual assumption of full responsibility for classroom. Some certification areas must complete placements at two levels. Spring. 6 credits.

m) course addition: :MAT 541 Internship Seminar

Prerequisite: Admission to the M.A.T. program. Corequisite: MAT 540. Cross disciplinary seminar focused on problem solving and reflection to improve student learning and support novice teachers. Attention to progress in action research. Spring. 1 credit.

n) :course addition: :MAT 542 Assessment of Student Learning

Prerequisite: Admission to the M.A.T. program. Corequisite: MAT 540. Design, implement, and analyze effective assessments of student learning, utilize state assessment data, make data-based decisions, and

document impact on K-12 student learning. Spring. 3 credits.

o) :course addition: :MAT 550 Research II: Conducting and Reporting Action Research

Prerequisites: Admission to the M.A.T. program; MAT 532, MAT 540, MAT 541, and MAT 542 (all with C or better); and GPA of 3.00 (or better) in MAT program. Complete the action research cycle by analyzing data and reporting research through paper and presentation. This is the second half of the program capstone (Plan E). Summer I. 3 credits.

p) Program addition: Preparing Excellent Teachers: M.A.T. Program with Specializations in Mathematics (7-12), Science (7-12), Spanish (7-12), English (7-12), Technology Education (PK-12) & Special Education (K-12)

The M.A.T. program, Preparing Effective Teachers, is designed to efficiently prepare qualified mid and early career professionals for K-12 teaching careers in the shortage areas of Mathematics, Science, Spanish, Technology Education, and Special Education. Candidates with documented content knowledge will complete 13 months of full-time study, earning teacher certification and the M.A.T. degree. Candidates complete the program in a cohort group that begins in late May of each year with candidates enrolling in Summer 1, Summer 2, Fall , Spring, and Summer 1 sessions to complete the program in late June of the following year, 13 months later. Nineteen of the 47 credits required in the program are earned in summer sessions. The program is designed to cross disciplines wherever possible, encouraging candidates to build content teaching expertise in their specialization and relate each discipline to the larger school curriculum. While the schedule of class offerings utilizes evenings and weekends wherever possible and may allow candidates to maintain some employment while completing the program, day-time field experiences and full-time student teaching in assigned public school settings are required elements of the program.

Course Requirements (47 total credits)

All M.A.T. programs include core, specialization and capstone components.

Core All M.A.T. candidates complete the following core courses (26 cr.):

MAT 510 Research on Teaching Diverse Learners (5 cr.)

MAT 511 Introduction to Special Education (1 cr.)

MAT 520 Design and Delivery of Instruction (4 cr.)

MAT 530 Meeting the Needs of Special Learners in the Classroom (3 cr.)

MAT 531 Literacy and Language Issues in the Classroom (3 cr.)

MAT 534 Creating Productive Learning Environments (3 cr.)

MAT 541 Internship Seminar (1 cr.)

MAT 542 Assessment of Student Learning (3 cr.)

MAT 551 Perspectives on Educational Policy and Practice (3 cr.)

Specialization Each M.A.T. candidate completes one of the following specialization areas (15 cr.):
Mathematics MAT 529 Content Pedagogy in Mathematics 1 (3 cr.) MAT 539 Content Pedagogy in Mathematics 2 (3 cr.) MAT 533 Field Experience in Mathematics (3 cr.) MAT 540 Internship in Mathematics (6 cr.)

Spanish MAT 529 Content Pedagogy in Spanish 1 (3 cr.) MAT 539 Content Pedagogy in Spanish 2 (3 cr.) MAT 533 Field Experience in Spanish (3 cr.) MAT 540 Internship in Spanish (6 cr)

Science MAT 529 Content Pedagogy in Science 1 (3 cr.) MAT 539 Content Pedagogy in Science 2 (3 cr.) MAT 533 Field Experience in Science (3 cr.) MAT 540 Internship in Science (6 cr)

English MAT 529 Content Pedagogy in English 1 (3 cr.) MAT 539 Content Pedagogy in English 2 (3 cr.) MAT 533 Field Experience in English (3 cr.) MAT 540 Internship in English (6 cr)

Technology Education MAT 529 Content Pedagogy in Technology Education 1 (3 cr.) MAT 539 Content Pedagogy in Technology Education 2 (3 cr.) MAT 533 Field Experience in Technology Education (3 cr.) MAT 540 Internship in Technology Education (6 cr)

Special Education MAT 529 Content Pedagogy in Special Education 1 (3 cr.) MAT 539 Content Pedagogy in Special Education 2 (3 cr.) MAT 533 Field Experience in Special Education (3 cr.) MAT 540 Internship in Special Education (6 cr.)

Capstone (All students will be Plan E.) All M.A.T. candidates complete the following capstone courses (6 cr.):

MAT 532 Research I: Reading and Designing Educational Research (3 cr.)

MAT 550 Research II: Conducting and Reporting Action Research (3 cr.)

7. Geography:

a. course addition: GEOG 100 Search in Geography

Introduction to processes and value systems in geography. Theme and title may vary from section to section. Course may be repeated one time with a different topic. Irregular. Study Area II. 3 credits.

9. Mathematical Sciences:

a. course addition: STAT 526 Data Mining for Genomics and Proteomics

Prerequisite: STAT 521 or permission of the instructor. Topics include selection of data mining methods appropriate for the goals of a biomedical study (supervised versus unsupervised, univariate versus multivariate), analysis of gene expression microarray data, biomarker discovery, feature selection, building and validation of classification models for medical diagnosis, prognosis, and drug discovery. Spring. 3 credits.

b. course addition: STAT 527 Text Mining

Prerequisite: STAT 521 or permission of the instructor. Intensive investigation of text mining methodologies, including pattern matching with regular expressions, reformatting data, contingency tables, part-of-speech tagging, and top-down parsing. Extensive use of Perl and Perl modules to analyze text documents. Spring. 3 credits.

10. Physical Education:

a. course addition: :REC 170 Introduction to Ice Hockey

Students will learn the beginning and/or intermediate fundamentals of ice hockey. Puck skills, skating with pucks and game play will be included. Winter Summer. 1 credit.

b. course addition: :REC 171 Introduction to Ice Skating

Students will learn the beginning and/or intermediate fundamentals of ice skating. Winter Summer. 1 credit.

11. Social Work:

a. course revision: :SW 227 Human Behavior and the Social Environment I

Change prerequisite to: BIO 111 or BMS 111, SOC 233.

b. course revision: :SW 368 Human Behavior and the Social Environment II

Delete special condition: Field work required.

c. Program revision::Major in Social Work, B.A.

Social Work majors are also required to complete the following as part of their general education requirements: BIO 111 *or BMS 111*; PS 110 or 230; ECON 200 and STAT 215.

12. Technology Education:

a. Program revision:

Change proposed degree name from : Technology Education to: Technology & Engineering Education (K-12).

END OF SENATE REPORT.