NEW YORK STATE EDUCATION DEPARTMENT

Office of Higher Education—Office of College and University Evaluation

89 Washington Avenue, Albany, NY 12234

Request to Change or Adapt a Registered Program	
Item	**Response** *(type in the requested information)*
Institution name and address	**ROCHESTER INSTITUTE OF TECHNOLOGY** **1 Lomb Memorial Drive** **Rochester, New York 14623** *Additional information*: ▪ Specify campus where program is offered, if other than the main campus:
Identify the program you wish to change	Program title: **Applied Mechanical Technology** Award (e.g., B.A., M.S.): **A.A.S.** Credits: Convert **98** quarter hours to **63** semester hours HEGIS code: **5315.0** Program code: **31074**
Contact person for this proposal	Name and title: **Christine M. Licata, Senior Associate Provost** Telephone:585-475-2953 Fax:585-475-4460 E-mail: cmlnbt@rit.edu

CEO (or designee) **approval** *Signature affirms the institution's commitment to support the program as revised.*	Name and title: **Jeremy Haefner, Provost and Sr. Vice President for Academic Affairs** Signature and date:
	If the program will be registered jointly[1] with another institution, provide the following information:
	Partner institution's name: Name and title of partner institution's CEO: Signature of partner institution's CEO:

Program Conversion Documentation

This form and accompanying tables should be used for conversion of all RIT programs: Associate, Baccalaureate, Masters, Ph.D., Dual Degree, Certificates and Advanced Certificates. This documentation will be used by the RIT curriculum review bodies and NYSED.

This form should also be used for program discontinuance. In the case of discontinuance, complete Section 1(H) ONLY and follow RIT Policy on Discontinuance (E 20) as appropriate.

Directions: Using the spaces and tables provided in this form, please respond to Section 1 (A-H) and Sections 2-5.

Note: In addition to responding to Section **1 (A-H) through Section 5:**

- If you are proposing to change the title of your program please list the old and new program titles on the first page of this document and fill in section **1 (C**) with the old and new program titles.
- If your program conversion involves converting a current dual degree program to the semester calendar, please also provide information requested in **Section 1(I).**
- If your program conversion involves merging or consolidating one of more existing programs into a new program, please provide information requested in **Section 1(J).**
- Use the program as currently registered with NYSED as the basis from which you describe changes. The last registered version of any program is available from Christine Licata, Sr. Associate Provost.
- Text boxes on this form and on Tables 1, 2 and 3 will expand as you type in them.

Documentation submission:

1. Submit required documentation as a total package to RIT curriculum review bodies.
2. Attach Table 1, Table 3 and Program Level Outcomes Assessment Plan as part of this package. (Directions for completion follow within this document.) There are links in this document to these required tables.
3. Table 2 is imbedded within this form and does not require a separate attachment.
4. Complete the document log on the last page of each "deliverable" before submitting the packet to the appropriate curriculum review body.

If you have questions or need assistance, please contact either your Associate Dean or:

- Charles Border, Chair, ICC
  - 475-7946, cbbics@rit.edu
- Ag Crassidis, Chair, Grad Council
  - 475-4730, alceme@rit.edu
- Christine Licata, Sr. Associate Provost
  - 475-2953, cmlnbt@rit.edu

1. RIT Program Conversion: Overview of Proposed Changes

Describe how program faculty used the calendar conversion process as an opportunity to revise and improve the program.

Program Improvements and Revisions

The Applied Mechanical Technology (AMT) AAS program is structured like NTID's AS associate+bachelor's degree programs and is designed to prepare students for seamless enrollment in RIT's College of Applied Science and Technology's (CAST) Mechanical and Manufacturing Engineering Technology (MMET) programs. The NTID Department of Engineering Studies (DES) supports the efforts for "quarter to semester" conversion, which will lead to sufficient program improvement for the best interests of students, faculty, and the workforce. The benefits for the curriculum conversion are additional instructional time to expand the curriculum into areas better preparing for transferability and extending the time for learning opportunities such as student innovation projects.

These benefits will increase and facilitate opportunities for collaborative academic programs, transferability, articulation agreements between the NTID Department of Engineering Studies (DES) and other programs, departments, or colleges throughout Rochester Institute of Technology or other universities.

By revising the existing curriculum and converting to a semester curriculum format, the DES seeks to take advantage of the opportunity to be innovative, improve overall academic efficiencies, strengthen our technical and career education contents, and prepare our students for CAST's Manufacturing and Mechanical Engineering Technology Program, an Accreditation Board for Engineering and Technology (ABET) accredited program.

The rationale for structuring the AMT – AAS program like the NTID's AS programs is two-fold. The first component is to satisfy CAST's AAS degree which is accredited by ABET. The second component is to satisfy the 30 credits of Liberal Arts requirement typically in NTID's AS associate+bachelor's degree programs. The goal was to take the best advantages of both components.

The AMT Curriculum Committee (Dino Laury, Ed Schwenzer, Diane Heyden, Patricia Igelsias) collaborated with CAST by holding weekly meetings on this subject since the Inter-collegiate Curriculum Committee (ICC) approved CAST's Mechanical and Manufacturing Engineering Program's curriculum late Winter Quarter 2010-2. The AMT committee took the opportunity to:

1. Review the Semester Conversion curriculum version supplied by CAST:
2. Review CAST core courses such as MCET-101 Fundamentals of Engineering, MCET-110 Foundations of Materials, MCET-111 Foundations of Materials Lab, MFET-120 Manufacturing Processes, MCET-150 Mechanical Design & Fab, and MCET-151 Mechanical Design & Fab Lab.
3. Work collaboratively with Professor(s) Anson, Slifka, and Leonard on NTID course outlines and details that would meet the visual learning needs typically required by NTID students, with the understanding that the contents remain the same as in the CAST courses.
4. Recommend NTID curriculum version of courses identified above which became: NETS-101 Fundamentals of Engineering, NETS-110 Foundations of Materials, NETS-111 Foundations of Materials Lab, NETS-120 Manufacturing Processes, NETS-150 Mechanical Design & Fab, and

NETS-151 Mechanical Design & Fab Lab.

5. Develop a curriculum mapping for an Associate degree with the RIT conversion guidelines requirement of 63 credits (32 technical credits and 31 general education credits.)

6. Revise a transfer agreement with CAST.

7. Disseminate to DES department curriculum committee (DCC), where AMT Curriculum committee resides, the curriculum and course outlines and descriptions for their review and keep them informed in department meetings and/or emails.

8. Meet with CAST / MMET chairperson and update the chair of our proposals. The chairperson is in agreement with the articulation efforts.

The highlights of changes from the quarter's Transfer Agreement to the semester's Transfer Agreement are:

1. The transferability rate remains similar (92% transferability rate in terms of course articulation).

2. The core courses infuse changes such as:

    a. In CAST, the MCET-101 Fundamentals of Engineering replaces 0617-262 Solid Modeling & Design course. This would be a new course for AMT. The AMT CC recommends NETS-101 Fundamentals of Engineering for AAS students.

    b. In CAST, MCET-110 Foundations of Materials is equivalent to 0610-211 Introduction to Materials Technology. MCET-111 Foundations of Materials Lab replaces 0610-304 Materials Testing course. The AMT CC recommends NETS-110 & 111 Foundations of Materials plus Lab for AAS students.

    c. In CAST, MFET-120 Manufacturing Processes is a replacement for 0617-220 and 0617-420 Manufacturing Process II and Lab. NTID had equivalent courses called 0813-223 Manufacturing Processes and 0813-224 Industrial Processes. These will be converted to NETS-120. The AMT CC recommends NETS-120 Manufacturing Processes for AAS students.

    d. In CAST, MCET-150 Mechanical Design & Fabrication is a replacement for 0617-220 Design, Dimensioning & Tolerancing and 0617-262 Solid Modeling and Design; and MCET-151 Mechanical Design & Fabrication Lab is replacing 0617-220 Lab. The AMT CC recommends NETS-150 & 151 Mechanical Design & Fabrication plus Lab for AMT students.

The content of each of the recommended courses above (denoted by NETS) is equivalent to the MCET or MFET course with the same number and name. However, the method of instruction will be designed to address the learning styles of our audience and contact hours will be more than in equivalent MCET and MFET courses.

The other changes that impacted the transfer agreement are:

1. EEET-215 Circuits and Electronics and EEET-216 Circuits and Electronics Lab are semester replacement courses for 0609-411 Electric Principles I in CAST. The lab was made a separate course. These were moved from the third year of the CAST program to the second year. They

need to be taken by AMT students and are new course requirements for AMT.

2. MCET-210 Materials in Engineering Design and MCET-211 Materials in Engineering Design Lab closely correspond to 0610-416 and 0610-409. These courses are new courses for AMT.

3. 0610-305 Pneumatics and Hydraulic course became MCET-330 and was moved into the 3rd year of CAST. Therefore it was deleted from the AMT program.

4. The mathematics requirements were changed to different Calculus courses.

Describe how your converted program responds to the RIT Academic Program Profile (see RIT Academic Program Profile: (http://www.rit.edu/conversion/media/documents/secure/ProgramProfile.pdf). How have you integrated the appropriate Essential Program Learning Outcomes from this profile into your program? Please also include these outcomes in your Program Level Assessment Plan in Section 3 of this form.

Academic Program Profile

The essential goal of the Applied Mechanical Technology (AMT) program is to prepare students for transferability to the College of Applied Science and Technology's (CAST) Mechanical and Manufacturing Engineering Technology (MMET) programs, which contain Mechanical Engineering Technology (MCET) and Manufacturing Engineering Technology (MFET) courses. Students will gain a wide range of skills and knowledge related to Mechanical and Manufacturing Engineering Technology (MMET). The curriculum is designed to foster the development of both hard and soft skills that students will need to begin a successful career. These goals of the AMT program will not only continue, but will be expanded with the semester conversion.

The changes to the curriculum along with the development of the Program Level Outcomes Assessment Plan were designed to incorporate a broader view of the AMT. Instruction is expanded in manufacturing processes, engineering materials, statics, strength of materials, dynamics, fluid mechanics, thermodynamics, computer aided engineering tools, mechanical design, and electric, hydraulic & pneumatics circuits. The essential breadth and depth of content will help students to increase their transferability into MMET programs, which are ABET accredited.

The CAST's ABET accredited programs for MMET include program outcomes that map to the RIT Goals. The program education objectives and program outcomes can be found within program sites (MCET: http://www.rit.edu/cast/mmetps/bs-in-mechanical-engineering-technology.php , and MFET: http://www.rit.edu/cast/mmetps/bs-in-manufacturing-engineering-technology.php), under the program accreditation tab.

Additionally, the ABET criteria requires CAST graduates to satisfy the following four program educational objectives (PEO's) by demonstrating knowledge and competence in the following areas:

1. A professional work ethic, a commitment to lifelong learning, quality and continuous improvement through the clear ability to assume increasing levels of technical and/or management responsibility.
2. Participation and leadership while working on teams involved in the analysis, design, development, implementation, or oversight of mechanical and/or manufacturing systems and processes.
3. An ability to design new and improved products, systems and processes that are appropriate for their use.

4. Effective communication with all levels of the organization.

Through rigorous continuous improvement, the CAST programs meet and exceed these criteria and the four essential program outcomes. Complete documentation of the continuous improvement program is available upon request.

Finally, the DES – AMT curriculum is being revised to incorporate the five Essential Program Learning Outcomes from the RIT Academic Program Profile.

Critical Thinking: Students must learn how to solve engineering-related problems; therefore, students must use their knowledge and skills to select appropriate problem solving methods to resolve a design process. Beyond developing skills to resolve design process, students will need to determine the best strategy to generate technical documents, utilize computer aided engineering tools, demonstrate presentation skills, use Solid Works to produce drawings utilize equation solving software, which will integrate engineering problem solutions into reports. Students will also be given an opportunity to engage in some research to help them make decisions related to design project.

Ethical Reasoning: Students will learn the purpose of design process tools to help facilitate design decisions related to mechanical components and problem solving methodologies to determine the success and failure of a design process. This will ensure the safety of the design production, and the impact on individual and consumers in their daily lives. Students will learn the importance of the design process and engaging problem solutions into reports. In addition to technical skills, students will develop soft-skills to facilitate on-the-job ethical behavior.

Integrative Literacy: Good, clear communication is a critical skill for the successful engineer-in-training. Students will learn the proper use of technical vocabulary and how to communicate technical information through the printed or electronic document as well as live presentations. Furthermore, students will use their math skills frequently in this program to calculate various resolutions, to determine the best practice, and to generate reports.

Global Interconnectedness: Engineering is a global trade that seeks solutions to global problems. Whether it is infrastructure, medical advancements, clean energy, or innovative mechanical and electronics sub-units like robots, engineering has an impact on the lives of people across the globe. Many of the engineering designs are produced through international standards including International Organization for Standards (ISO) such as ISO 9001.

Creative/Innovative Thinking: All students will engage in several design projects during several semesters as building blocks in the program. Students will be given some project guidelines and criteria, and they work together as a team to develop the project using their skills recently acquired. Furthermore, these students will produce presentation graphics in order to give a presentation of their project design to an audience of their peers.

For a more complete course-level description of how the five Essential Program Learning Outcomes are being incorporated, see the attached **Program Level Outcomes Assessment Plan**.

NYSED

Program Goals, Objectives, Focus and/or Design

Have there been changes to the goals, objectives, focus and /or design of the program?

	No changes
X	Slight-moderate changes
	Substantive changes (e.g., substantial change in the focus and design of the program; change of 1/3 or more in program outcomes/objectives and accompanying content of the program).

Explain any proposed changes, the rationale for these changes, the impact of changes on the capacity of current faculty to deliver the revised program, impact, if any, on current admissions standards and the expected impact on enrollment projections. Enrollment Projection changes should be provided by EMCS, as appropriate.

It is the sentiment of the Applied Mechanical Technology (AMT) faculty that the current program achieves its goals as advertised: preparing students for seamless enrollment in the mechanical and manufacturing engineering technology baccalaureate program. However, by infusing more mechanical and manufacturing skills, and design process related content into the curriculum we intend to give graduates broader skills. Students will participate on teams involving analysis, design, development, and implementation of mechanical and/or manufacturing systems processes and effective communications. This will facilitate success in the College of Applied Science and Technology's (CAST) Mechanical and Manufacturing Engineering Technology (MCET / MFET) programs.

The changes to the AMT program reflect changes made by the MCET/MFET programs which mainly exist in the areas of sequencing and organization of content. We have a quarter-based curriculum with a strong assessment process already in place. Program goals, program learning outcomes, curriculum (program focus, content, requirements, course inventory, etc.), and individual course outcomes remain very similar. The transferability rate remains similar; 92% of courses transfer to the baccalaureate program.

The opportunity to review and improve the program resulted in a minor refocus of educational content. Some program content was moved from courses where it had resided to courses with related content in the new semester format. Where appropriate, yearlong sequences have been converted from three quarter courses to two semester courses. For example, 0610-302 *Introduction to Statics*, 0610-303 *Strength of Materials* and 0610-315 *Principles of Mechanical Design* were combined and content related to dynamics and machine design was added to become semester courses MCET-220 *Principles of Statics* and MCET-221 *Strength of Materials*. In most cases laboratory courses have been created as stand-alone courses.

Several courses from the CAST MMET program will be taught as equivalent courses in the AMT program under the discipline code NETS. For example,

a. Content in CAST's MCET-101 *Fundamentals of Engineering* course will be taught as NETS-101 *Fundamentals of Engineering*. This is a new course for the AMT program.

b. Content in CAST's MCET-110 *Foundations of Materials* and MCET-111 *Foundations of Materials Lab* will be taught as NETS-110 & 111 *Foundations of Materials* plus *Lab*.

c. Content in CAST's MFET-120 *Manufacturing Processes* will be taught as NETS-120 *Manufacturing Processes*.

d. Content in CAST's MCET-150 *Mechanical Design & Fabrication* and MCET-151 *Mechanical Design & Fabrication Lab* will be taught as *NETS-150 & 151 Mechanical Design & Fabrication* plus *Lab.*

Two courses plus associated labs were added to the AMT program because they were moved to the second year of the CAST MMET programs. These include EEET-215 *Circuits and Electronics* and EEET-216 *Circuits and Electronics Lab,* and MCET-210 *Materials in Engineering Design* and MCET-211 *Materials in Engineering Design Lab.*

B. Program Options or Concentrations (i.e., a specific group of related courses that lead to greater understanding in a field or discipline).

X	No changes to options or concentrations
	Kept current option(s)/concentrations with some revisions
	Added an option(s)/concentration(s)
	Title of new option(s)/concentration(s)
	Eliminated option(s)/concentration(s)

Explain these proposed changes and the rationale for these changes:

C. Program Title

X	No change in program title
	New program title proposed New program title: Old program title:
	Explain the rationale for any proposed change in program title:

D. Elimination of a requirement for completion (e.g. requirements to be eliminated might include an internship, clinical, cooperative education or other work-based experience).

X	No change in requirements
	Change made to program completion requirements

Describe any change proposed and the rationale for the change:

E. Change in program award (e.g. BFA to BS, MBA to MS, etc).

X	No change in program award
	Change in program award

Describe any proposed change and the rationale for the change:

F. **Mode of delivery** (e.g. adding distance education format).

X	No change in mode of delivery
	Change in mode of delivery

Describe the change proposed and the rationale for the change:

G. Format Change (a change that alters the program's financial aid eligibility;e.g. from full-time to part-time, or to an abbreviated or accelerated semester format).

X	No change in format
	Proposed change in format

Describe the proposed change in format and any change in availability of courses, faculty, resources or support services that this proposed format change requires:

H. Discontinuing a Program

X	No discontinuance
	Proposed discontinuance

Indicate the date by which the program will be discontinued and reason for discontinuance action:

I. Dual-Degree Program

a) Complete the following table to identify the existing programs:

	Program Title	Degree Award	Program Code
Program 1			
Program 2			

b) Proposed dual-degree program (title and award):

c) Courses that will be counted toward both awards:

d) Length of time for candidates to complete the proposed program:

e) Use the Sample Program Schedule in Table 1 to show the sequencing and scheduling of courses in the dual-degree program.

J. Creating a new program by merging or consolidating with one or more existing programs and basing the new program entirely on existing courses converted to semester calendar

a) Provide Current Program Name(s) and Program Code(s)

b) Brief description of proposed program and rationale for converting the existing coursework to a separately registered program.

c) Brief description of the expected impact on existing program(s).

d) Adjustments the institution will make to its current resource allocations to support the newly created program.

e) Statement confirming that the admissions standards, process and evaluation methods are the same as those in the existing program.

2. Program Course Mask and Schedule

Directions:
a. Using Table 1, display program course sequencing by semester. Use the table to show how a typical student may progress through the program.
b. Using **Table 2** (which follows below), display program in the quarter calendar and how program has been converted to the semester calendar. Please follow the course conversion designation directions on Table 2.

Table 2

Program Course Conversion Table: Quarter Calendar and Semester Calendar Comparison

Name of Program: Applied Mechanical Technology Degree: AS

Directions: Use the following legend to show course comparison in quarter calendar and semester formats. Display all required program courses and program-specific elective courses. Display General Education course requirements with generic label (not each course) of "Liberal Arts and Sciences "= X Credits. Clarify how course sequences in the quarter calendar convert to semesters by either bracketing or using some other notation.

Course Conversion Designations

Semester Equivalent (SE) – Closely corresponds to one quarter course (e.g., a 4 quarter credit hour (qch) course which becomes a 3 semester credit hour (sch) course.) The semester course may develop material in greater depth or length, but no new content is added. Identify the number and the title of the quarter course being converted.

Semester Replacement (SR) – A semester course (or courses) taking the place of previous a quarter course(s) by rearranging or combining material from a previous quarter course(s) (e.g. a two semester sequence that replaces a three quarter sequence). List the new semester course or sequence and the old quarter course or sequence it is replacing. For all SR designations, if additional space is needed to describe the distribution of content among courses, use space provided in the last column.

New (N) - No corresponding quarter course(s). This course adds significant new curriculum content.

Course Deleted (D) – No corresponding semester course.

Year	QUARTER: Current Program Courses			SEMESTER: Converted Program Courses			Course Conversion Designation	
	Course #	Course Title	QCH	Course #	Course Title	SCH	Course Conversion Designation **SE, SR, N, D**	Additional comments on content distribution within semester courses
1				NETS-101	Fundamentals of Engineering	3	N	Developed to be consistent with CAST MMET program requirements; content equivalent to MCET-101 Fundamentals of Engineering
	0813-220	Engineering Fundamentals	4				(D)	Course to be retained for other ES programs
	0890-212	Computing Tools for ET	4				(D)	Course to be retained for other ES programs
	0813-222 0813-224	Manufacturing Processes Industrial Processes	4 4	NETS-120	Manufacturing Processes	3	SR	Merged content from 0813-222 and 0813-224. Corresponds to CAST MFET-120 Manufacturing Processes.
	0890-214	CAD Applications in ET	4	NETS-150	Mechanical Design & Fabrication	3	SR	0890-214 and 0890-216 become NETS-150/NETS-151; NETS-150 closely corresponds to CAST MCET-150 Mechanical Design & Fabrication
	0890-216	Design, Dimensioning & Tolerancing	4	NETS-151	Mechanical Design & Fabrication Lab	1	SR	0890-214 and 0890-216 become NETS-150/NETS-151; NETS-151 closely corresponds to CAST MCET-151 Mechanical Design & Fabrication
				NETS-110	Foundations of Materials	2	N	Moved from 2nd year; No new content in AMT; content equivalent to CAST MCET-110
				NETS-111	Foundations of Materials Lab	1	N	Moved from 2nd year; No new content in AMT; Content equivalent to CAST MCET-111
	0887-200	Freshman Seminar	2		First-year Seminar	3		
		Choose two of the following three courses:	8					
	0884-220	Elements of Trigonometry	(4)				(D)	Course to be retained for other programs

Year	QUARTER: Current Program Courses			SEMESTER: Converted Program Courses			Course Conversion Designation	
	0502-111	Written Communication II	(4)	ENGL-099	Basic Writing	3		Basic Writing will replace Written Comm II
	0885-201	Physics	(4)				(D)	Course to be retained for other programs
	0884-275	Advanced Math	4				(D)	Course to be retained for other programs
	0502-227	Writing Seminar	4		First-year Writing Seminar	3	SE	Closely corresponds to quarter course.
				MATH-171	Calculus A	3	SR	1016-271 and part of 1016-272; moved from 2nd year
				MATH-172	Calculus B	3	SR	1016-273 and part of 1016-272; moved from 2nd year
	1017-211	College Physics I	4	PHYS-111	College Physics I – LAS-P6	4	SR	1017-211 and part of 1017-212; 1017-212 was in 2nd yr.
		CLA	4					Moved to Year 2
		PE Wellness	0					

2	0610-211	Intro to Materials Technology	3	(MCET-110)	(Foundations of Materials)	(2)	(SE)	Moved to 1st yr as MCET-110 in CAST; Content equivalent to NETS-110 1st yr in AMT program
	0610-304	Materials Testing (w/0610-211)	1	(MCET-111)	(Foundations of Materials Lab)	(1)	(SE)	Moved to 1st yr as MCET-111 in CAST; Content equivalent to NETS-111 1st yr in AMT program
	0610-302	Intro to Statics (1017-211)	4	MCET-220	Principles of Statics	3	SE	Closely corresponds to quarter course.
	0610-303	Strength of Materials	4	MCET-221	Strength of Materials	3	SE	Adding new content in dynamics and Mach. Design.
	0610-315	Principle of Mech. Design	4				D	Content moved into other courses.
	0610-305	Pneumatic & Hydraulic Systems	4				(D)	Moved to Year 3 in CAST program as MCET-330; delete from AMT program
				MCET-210	Mat'l in Engineering Design	2	(SE)	Closely corresponds to quarter course 0610-416; new to AMT program
				MCET-211	Mat'l in Engineering Design Lab	1	(SE)	Closely corresponds to quarter course 0610-409; new to AMT program
				EEET-215	Circuits/Electronics	2	(SR)	With EEET-216 replaces quarter course 0609-411; moved from 3rd yr. of CAST MMET program; new to AMT program
				EEET-216	Circuits/Electronics Lab	1	(SR)	0609-411 lab broken out into separate course code; new to AMT program
	1016-231	Calc for Eng'r Tech I	4				D	Replaced by MATH-171; moved to 1st year
	1016-232	Calc for Eng'r Tech II	4				D	Replaced by MATH-172; moved to 1st year
				MATH-211	Calculus & Diff. Equation	3	SE	Closely corresponds to quarter course 1016-304; new to AS program
	1017-212	College Physics II	4	PHYS-112	Physics II	4	SR	PHYS-112 is SR for 1017-213 and part of 1017-212
	1017-213	College Physics III	4				SR	PHYS-112 is SR for 1017-213 and part of 1017-212
	CLA	Humanities	4		LAS-P1	3	SE	
	CLA	Humanities	4		LAS-P2	3	SE	
	CLA	Social Science	4		LAS-P3	3	SE	
					LAS-P4	3	SE	
		PE Activities (2)	0					
		Total	**98**		**Total**	**63**		

3. Program Level Outcomes Assessment Plan

See Program Outcomes Assessment Overview and Directions for guidance, required form, and sample plans.

☒	a. Attach updated Program Level Outcomes Assessment Plan which should include how your program meets the RIT Essential Program Outcomes outlined in the RIT Academic Program Profile. b. Program Assessment Plan should follow one of the formats found at: *Program Level Outcomes Assessment Plan Blank Form Option 1* *Program Level Outcomes Assessment Plan Blank Form Option 2* *Program Level Outcomes Assessment Plan Blank Form Option 3*
☒	c. Complete information requested in Table 3 for Middle States. (See: Sample Completed Form for guidance and other information.)

4. RIT Incremental Resources (faculty, space, library holdings, equipment, other)

It is not expected that significant incremental resources will be required to deliver the same program outcomes in a semester format. If you believe that incremental resources are required, please explain.

None Needed

5. RIT Course Outlines

Course outlines for all required courses offered by the program and any program-specific electives must be deposited in the course outlines-final PDF module using the proper naming conventions. Use the RIT Course Outline Form.

For guidance on assignment of appropriate credit hour/contact hour designation, please refer to: http://www.msche.org/documents/Degree-and-Credit-Guidelines-062209-FINAL%5B1%5DDec09.pdf

Programform.doc

NYSED Documentation Form

Audience

This document is intended for all department chairs and program directors.

Summary

This document includes the information and required forms for submission of program to NYSED for semester conversion.

Change Log

Responsible	Date	Version	Short description
Chris Licata	6/15/2010	1	Document originator
Dino Laury	4/22/2011	2.1	Updated and posted document
Dino Laury / Marianne Gustafson	5/11/11	3	NCC feedback

Table 1a: Undergraduate Program Schedule

Applied Mechanical Technology - AAS

- Indicate academic calendar type: _X_ Semester ___Quarter ___ Trimester ___Other (describe)

Term: Fall 1		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
NETS-101 Fundamentals of Engineering	3		✓	✓	
NETS-110 Foundations of Materials	2		✓		Co-req NETS-111
NETS-111 Foundations of Materials Lab	1		✓		Co-req NETS-110
LAS E1: MATH-171 Calculus A	3	✓			
ENGL-099 Basic Writing	3		✓		
First-year Seminar	3	✓			
Term credit total:	15	6	9		

Term: Spring 1		(Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
NETS-120 Manufacturing Processes	3		✓		
NETS-150 Mechanical Design & Fab	3		✓		Co-req NETS-151
NETS-151 Mechanical Design & Fab Lab	1		✓		Co-req NETS-150
MATH-172 Calculus B	3	✓			
LAS P6: PHYS-111 College Physics 1	4	✓			
First Year Writing Seminar	3	✓			
Term credit total:	17	10	7		

Term: Fall 2		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MCET-220 Principles of Statics	3		✓		PHYS-111
MCET-210 Materials in Engineering Design	2		✓	✓	NETS-110/111; co-req. MCET-211
MCET-211 Materials in Engineering Design Lab	1		✓	✓	NETS-110/111; co-req. MCET-210
PHYS-112 College Physics II	4	✓			PHYS-111
LAS-P1	3	✓			
LAS-P2	3	✓			
Term credit total:	16	10	6		

Term: Spring 2		(Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MCET-221 Strength of Materials	3		✓		MCET-220
EEET-215 Circuits / Electronics	2		✓	✓	MATH-111 or higher; co-req. EEET-216
EEET-216 Circuits / Electronics Lab	1		✓	✓	Co-req. EEET-215
MATH-211 Calculus & Diff.Equations	3		✓		MATH-172
LAS-P3	3	✓			
LAS-P4	3	✓			
Term credit total:	15	6	9		

Term:		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
Term credit total:	0	0	0		

Term:		Check course classification (s			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
Term credit total:	0	0	0		

Program Totals:	**Credits: 63**	**Liberal Arts & Sciences: 32**	**Major: 31**	**Elective & Other: 0**

Cr: credits **LAS:** liberal arts & sciences **Maj:** major requirement **New:** new course **Prerequisite(s):** list prerequisite(s) for the noted courses

Table1.doc

Program Course Mask and Schedule

Audience

This document is intended for all department chairs and program directors.

Summary

This document is the table for the program course mask and schedule.

Change Log

Responsible	Date	Version	Short description
Chris Licata	6/15/2010	1	Document originator
Dino Laury	4/23/2010	2	Revised Course Names
Dino Laury/ Marianne Gustafson	5/12/11	3	NCC Feedback
Marianne Gustafson	5/19/11	4	ICC Feedback

TABLE 3

Use of Program Level Assessment Data to Inform Calendar Conversion

Program Name/College ___Applied Mechanical Technology / NTID_____

Program Assessment Contact _Dino Laury (Chair) & James Fugate (Assessment Coordinator)_____

Describe how you used the results from your current program level outcomes assessment plan to inform proposed changes to your program made as part of the conversion to semesters.

Changes to Curriculum (program focus, content, requirements, course inventory, etc.)	**Data Source (2009-10) List data, measures, findings, etc. used to inform change(s).**
Changes to the curriculum for semester conversion are based on CAST changes, not a result of quarter-based outcomes. Making satisfactory progress while in the AMT program is critical to student transferability. The program is new and had only five students in AY 2009-2010. The preliminary outcome is showing healthy results. Students completing the AAS program will be accepted into CAST's Mechanical or Manufacturing engineering technologies program.	Five students coded NAMA enrolled in either 0610-220 Design, Dimensioning & Tolerance (n=1) or 0890-216 (n=4)*. 4 of 5 received C or better. Five students enrolled in 0617-420 Mfg Process II (n=1) or 0813-224 Industrial Processes (n=4).* 5 of 5 students received a grade of C or better. Graduated from AMT (n=1). Transferred to CAST (n=1). Preliminary outcome is showing healthy results. One graduate – one transfer = 100%.
Changes to Instruction (pedagogy, strategies, etc.)	
The method of classroom instruction remains unchanged. The additional five weeks of instruction allows flexibility to expand the number of projects students are required to complete.	Within the current quarter system, students are often rushed to complete their projects. The additional five weeks of instruction should resolve this issue. A student survey instrument will be the primary assessment tool. Data collection will begin Fall semester 2015.
Changes to Program Assessment Plan (outcomes, data sources, instruments, etc.)	
The program goal outcome assessment plan was revised to address RIT's Essential Program Outcomes. Success in four core courses in the AAS program and one critical course in the BS program was added to the Assessment Plan.	Data collection will begin with the implementation of the semester system beginning AY 2013/2014
Other Programmatic Changes/Comments	

Table3.doc

Version 1

Audience

This document is intended for all department chairs and program directors.

Summary

This document is used to collect information on the use of program-level outcomes data to make improvements and changes to programs.

Change Log

Responsible	Date	Version	Short description
Anne Wahl	6/15/2010	1	Document originator
Diane Heyden	04/28/11	2	Semester Conversion
Dino Laury	5/5/11	3	NCC feedback

Option 1

Program Level Outcomes Assessment Plan

Program Name/College: Applied Mechanical Technology (AMT) / National Technical Institute for the Deaf (NTID)

College Contact for Program Assessment: James Fugate (Program Assessment Coordinator) & Dino Laury (Department Chair)

Program Goals	Student Learning Outcomes	Academic Program Profile	Data Source/Measure Curriculum Mapping	Benchmark	Timeline	Data Analysis Key Findings	Use of Results Action Items and Dissemination
Develop knowledge of traditional manufacturing techniques and how they relate to basic engineering concepts	Demonstrate competency in design and manufacturing of mechanical components	☒ Critical Thinking ☐ Ethical Reasoning ☐ Integrative Literacies ☒ Global Interconnectedness ☒ Creative/Innovative Thinking	Mechanical Design & Fab (NETS-150) and Lab (NETS-151) Graded assignment	75% of students will achieve a grade of C or better on written test and final project	Collection: annually at end of fall semester beginning AY 2013/2014	Data collected by Assessment Coordinator	Shared with program faculty, annual college summary report, NTID Annual Report, and RIT requested reports
Preparation for entry to CAST manufacturing and mechanical engineering technology programs	Demonstrate competency in core technical courses needed to meet admissions requirements into CAST manufacturing and mechanical engineering technology programs	☒ Critical Thinking ☒ Ethical Reasoning ☒ Integrative Literacies ☐ Global Interconnectedness ☒ Creative/Innovative Thinking	Fundamentals of Engr. (NETS-101) Foundations of Mat'l (NETS-110) Foundations of Mat'l Lab (NETS-111) Manufacturing Process (NETS-120) Mechanical Design & Fab (NETS-150) and Lab Mechanical Design &Fab (NETS-151) Course grades and Change of Program form	75% of students completing the AMT degree will achieve a grade of C or better in all four core courses and be accepted into CAST mechanical or manufacturing engineering technology programs	Collection: annually at end of spring semester beginning AY 2013/2014	Data collected by Assessment Coordinator	Shared with program faculty, annual college summary report, NTID Annual Report, and RIT requested reports
Success in course work required in CAST mechanical or manufacturing engineering technology programs	Demonstrate competency in analysis and design of structures and machine components	☒ Critical Thinking ☐ Ethical Reasoning ☐ Integrative Literacies ☒ Global Interconnectedness ☐ Creative/Innovative Thinking	Strength of Materials MCET-221 Course grade	75% of students will achieve a grade of C or better	Collection: annually at end of spring semester beginning AY 2014/2015	Data collected by Assessment Coordinator	Shared with program faculty, annual college summary report, NTID Annual Report, and RIT requested reports

Success in CAST BS mechanical or manufacturing engineering technology programs	Earn BS degree in CAST mechanical or manufacturing engineering technology	☐ Critical Thinking ☐ Ethical Reasoning ☐ Integrative Literacies ☐ Global Interconnectedness ☐ Creative/Innovative Thinking	Graduation Rates	For AMT graduates who transfer to a CAST engineering program, retention and graduation rates will not be significantly different than those of other transfer students	Collection: annually at end of spring semester beginning AY 2016/2017	Data collected by Assessment Coordinator	Shared with program faculty, annual college summary report, NTID Annual Report, and RIT requested reports
Achieve student satisfaction with AMT courses and program	Graduates of the AMT program will indicate satisfaction with courses and program	☐ Critical Thinking ☐ Ethical Reasoning ☐ Integrative Literacies ☐ Global Interconnectedness ☐ Creative/Innovative Thinking	Student satisfaction survey instrument	75% of students graduating will indicate “satisfaction” with AMT courses and the program on the Student Satisfaction Survey Instrument.	Collection: annually at end of spring semester beginning AY 2014/2015	Data collected by Assessment Coordinator	Shared with program faculty, annual college summary report, NTID Annual Report, and RIT requested reports

Applied Mechanical Technology Program
National Technical Institute for the Deaf
Rochester Institute of Technology

Transfer Agreement
with

Mechanical or Manufacturing Engineering Technology Programs
College of Applied Science & Technology (CAST)
Rochester Institute of Technology

Effective Date: August 2013

The purpose of this transfer agreement is to:

- Attract qualified students to RIT's College of Applied Science & Technology (CAST);
- Facilitate the transition of qualified transfer students from the National Technical Institute for the Deaf (NTID) to CAST;
- Encourage academic cooperation and exchange of information between the NTID and CAST.

TERMS

RIT's College of Applied Science & Technology (CAST) agrees to accept into either the Mechanical Engineering Technology or Manufacturing Engineering Technology program those qualified students who have successfully completed the Associate of Applied Science (AAS) in Applied Mechanical Technology (AMT) offered through the NTID's Engineering Studies Department. Qualified students should demonstrate success and a student in good standing at NTID. Transfer credit will be awarded for four (4) AMT technical courses completed with a grade of C or better.

A review of this transfer agreement can be initiated by either college in the case of significant curriculum changes. However, this agreement will be reviewed no less than every five (5) years.

Dr. Fred Walker, Dean
College of Applied Science & Technology

Dr. Gerard Buckley, President/Dean
National Technical Institute for the Deaf

Linda Tolan, Associate Dean
College of Applied Science & Technology

Dr. Laurie Brewer, Associate VP of Academic Affairs
National Technical Institute for the Deaf

Daniel P Johnson, Chairperson
College of Applied Science & Technology

Dino Laury (Laurla), Chairperson, Engineering Studies
National Technical Institute for the Deaf

ARTICULATION AGREEMENT

National Technical Institute for the Deaf / RIT CAST
AAS Degree - Applied Mechanical Technology Degree:
BS Degree – Mechanical / Manufacturing Engineering Technology

NTID AMT		RIT CAST		
Year 1		Year 1		
NETS-101 Fundamentals of Engineering	3	MCET-101 Fundamentals of Engineering	3	
NETS-110 Foundations of Materials	2	MCET-110 Foundations of Materials	2	
NETS-111 Foundations of Materials Lab	1	MCET-111 Foundations of Materials Lab	1	
LAS-P1	3	LAS-P1	3	
NETS-120 Manufacturing Processes	3	MFET-120 Manufacturing Processes	3	
NETS-150 Mechanical Design & Fabrication	3	MCET-150 Mechanical Design & Fabrication	3	
NETS-151 Mechanical Design & Fabrication Lab	1	MCET-151 Mechanical Design & Fabrication Lab	1	
ENGL-099 Basic Writing	3	----------	--	
MATH-171 Calculus A (LAS-E1)	3	MATH-171 Calculus A (LAS-P7a)	3	
MATH-172 Calculus B	3	MATH-172 Calculus B (LAS-P7b)	3	
PHYS-111 College Physics I (LAS-P6)	4	PHYS-111 College Physics I (LAS-P6)	4	
First Year Seminar	3	First Year Seminar	3	
First Year Writing Seminar	3	First Year Writing Seminar	3	
Year 2		Year 2		
MCET-220 Principles of Statics	3	MCET-220 Principles of Statics	3	
MCET-210 Materials in Engineering Design	2	MCET-210 Materials in Engineering Design	2	
MCET-211 Materials in Engineering Design Lab	1	MCET-211 Materials in Engineering Design Lab	1	
PHYS-112 College Physics II	4	PHYS-112 College Physics II (LAS-P5)	4	
MCET-221 Strength of Materials	3	MCET-221 Strength of Materials	3	
EEET-215 Circuits/Electronics	2	EEET-215 Circuits/Electronics	2	
EEET-216 Circuits/Electronics Lab	1	EEET-216 Circuits/Electronics Lab	1	
MATH-211 Calculus & Diff. Equations	3	MATH-211 Calculus & Diff. Equations	3	
LAS-P2	3	LAS-P2	3	
LAS-P3	3	LAS-P3	3	
LAS-P4	3	LAS-P4 (Taken in CAST MMET in 3rd year)	3	
Note: NTID students will need to pick up two courses (STAT-145 Introduction to Statistics and COMM-403 Effective Technical Communication) in the third year. The reason for this movement is to satisfy the 30 credits of LAS requirements typically included in NTID's AS associate+bachelor's degree programs. NTID students will have taken LAS-P4 which does not occur in CAST MMET until the third Fall Semester.				
TOTAL credits:	**63**	**Total transfer Credit**	**60**	**92%**

Clerical Revisions 5-19-11 mg