WASHTENAW COMMUNITY COLLEGE

PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: CTAMTC **Program Name:** Automation Technology **Effective Term:** Fall 2007

Division Code: HAT **Department:** INTD

Directions:

1. Attach the current program listing from the WCC catalog or Web site and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
3. Check the boxes below for each type of change being proposed. Changes to courses, discontinuing a course, or adding new courses as part of the proposed program change, must be approved separately using a Master Syllabus form, but should be submitted at the same time as the program change form.

Requested Changes:

- ☐ Review
- ☒ Remove course(s): ROB 170
- ☒ Add course(s): ROB 171 and ROB 172
- ☐ Program title (title was _____)
- ☐ Description
- ☐ Type of award
- ☐ Advisors
- ☐ Articulation information
- ☐ Program admission requirements
- ☐ Continuing eligibility requirements
- ☐ Program outcomes
- ☐ Accreditation information
- ☐ Discontinuation (attach program discontinuation plan that includes transition of students and timetable for phasing out courses)
- ☒ Other PHY 110 or any 100-level or higher, 3 credit or more course in the Natural Sciences

Show all changes on the attached page from the catalog.

Rationale for proposed changes or discontinuation:

ROB 171: Introduction to FIRST Robotics – Provide students a Fall semester introduction and preparation for the January – March design, build, and competition season.

ROB 172: FIRST Robotics Competition - design, build, and compete in the FIRST Robotics Regional competition, Winter semester, January – March..

Any 100-level or higher 3 credit or more course in the Natural Sciences. – makes program available to a wider student audience.

Financial/staffing/equipment/space implications:

No additional.

List departments that have been consulted regarding their use of this program.

WTMC Administration
Natural Sciences Department

Signatures:

Reviewer	Print Name	Signature	Date
Initiator	GARY L. SCHULTZ	Gary L Schultz	10/1/07
Department Chair	GARY L. SCHULTZ	Gary L Schultz	10/1/07
Division Dean/Administrator	Granville Lee, Dean of Health and Applied Technologies Deborah Trapp, Dean WTMC		10/1/07
Vice President for Instruction	Roger Palay	Roger M. Palay	10/2/07
President			

Do not write in shaded area. Entered in: Banner 9/28 LW C&A Database 9/28 Log File 9/21/07 Board Approval N/A

Please submit completed form to the Office of Curriculum and Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

Program Information Report

Industrial, Manufacturing, & Automation Technology

Automation Technology (CTAMTC)

Certificate

Program Effective Term: **Fall 2008**

This program prepares students with the knowledge, skills, and attitudes needed for further advancement into science, technology, and engineering careers. Students will also be prepared to participate in the FIRST (For Inspiration and Recognition in Science and Technology) regional competition and championship events. The capstone course for this program culminates in the hands-on building of a robot used in competition.

Major/Area Requirements		**(15 credits)**
MTH 157	Practical Geometry and Trigonometry	3
PHY 110	Applied Physics*	4
ROB 121	Robotics I	4
ROB 171	Introduction to FIRST Robotics	1
ROB 172	FIRST Robotics Competition	3

**Students may take PHY 110 or any 100-level or higher, 3 credit or more course in the following disciplines: AST, BIO, CEM, GLG, or PHY. Does not include GLG 202, GLG 289, or PHY 100.*

Minimum Credits Required for the Program: **15**

PROGRAM PROPOSAL FORM

☐ **Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.

☒ **Final Approval** – Check here when completing this form after the Vice President of Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

Program Name:	Automation Technology	**Program Code:** CTAMTC
Division and Department:	Health and Applied Technologies (HAT)/ Industrial Technology (INTD)	
Type of Award:	☐ AA ☐ AS ☐ AAS ☒ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Comp.	
Effective Term/Year:	Fall 2005	**CIP Code:** 15.0405
Initiator:	Gary Schultz	

Program Features Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.	**Program's purpose and its goals:** This program is designed to excite and motivate students in science, technology, and engineering careers. They will learn the basis of knowledge, skills, and attitudes used to succeed in the Automation Technology Associate Degree Program. They will also complete a capstone course based on the principles, guidelines, and rules of the For Inspiration and Recognition in Science and Technology (FIRST) Robotics competition. **Projected Enrollment** – WTMC students, area high school students, and WCC students interested in obtaining an Automation Technology AAS Degree. Twenty-four (24) students per year. Successful completion of this certificate prepares students for continued coursework in the Automation Technology AAS Degree program. Students will be involved in a variety of instruction and learning experiences in a cooperative team teaching environment. FIRST participants are eligible for more than $4.6 million in scholarships for advanced degrees, from leading universities, colleges, and companies.	
Need Need for the program with evidence to support the stated need.	Discussion and conversation with WTMC administration and staff indicates that an additional occupational certificate that meets WTMC student graduation requirements for math (algebra) and science (physics), is appropriate. As students work together in small groups and in the completion of the Robotics competition project they build self-esteem, self confidence; develop critical life skills such as project management, teamwork, problem solving, communications, and appreciation of diversity.	
Program Outcomes/Assessment State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.	**Outcomes** 1. Apply knowledge and skills learned to FIRST Robotics competition. 2. Write and discuss the skills they learned and how the skills and knowledge are applied to a course of study for advanced education.	**Assessment method** 1. Adhering to the criteria, rules and regulations of the FIRST Robotics competition by conforming to the FIRST rules checklist. 2. Team self-evaluation of the six week build experience.

Curriculum Courses. List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.	MTH 152: Technical Geometry and Trigonometry or higher (4 credits/60 contact hours) PHY 110: Applied Physics or higher (4 credits/90 contact hours) ROB 121: Robotics I (4 credits / 90 contacts hours) ROB 189: Special Projects - FIRST Robotics Competition (4 credits / 90 contact hours) **Totals . . . 16 credit hours / 330 contact hours** 1 10 lect 80 other
Budget Specify program costs in the following areas, per academic year: Faculty Training/travel Materials/resources Facilities/equipment Other	**Start-up costs** **Ongoing costs (Annual)** Competition Registration Fees, $6,000 Robots, Practice field Parts, Tools, $7,000 Shipping, Team uniforms, Team Marketing, $2,000 Food and Travel Expenses: • Regional, $1,000 • National, $10,000 (if needed) Plans include the securing of corporate sponsors for all start-up and ongoing costs.
Program Description for Catalog and Web site	This program prepares students with the knowledge, skills, and attitudes needed for further advancement into science, technology, and engineering careers. Students develop the skills, knowledge and attitudes that prepare them for the For Inspiration and Recognition in Science and Technology (FIRST) regional competition and Championship events. The capstone course for this program culminates in the hands-on building of the robot used in competition.
Program Information	**Accreditation/Licensure -** **Advisors –** Gary Schultz **Advisory Committee:** David Dugger, Associate Dean, WTMC Corporate and Community Sponsors FIRST 200 Bedford Street Manchester, NH 03101 (800) 871-8326 www.usfirst.org **Admission requirements -** **Articulation agreements -** **Continuing eligibility requirements -**

Assessment plan:

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Course section(s)/other population	Number students to be assessed
Apply knowledge and skills learned to FIRST Robotics competition.	FIRST Robotics Competition Manual. Checklist.	Annually		24
Write and discuss the skills they learned and how the skills and knowledge are applied to a course of study for advanced education.	Team self-evaluation.	Annually		24

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Describe the scoring range to be used, or include a copy of the rubric.
   Departmentally developed rubric and external evaluation by sponsors and community leaders.

2. Indicate the standard of success to be used for this assessment
   75% of students must meet all learning outcomes.

3. Indicate who will score and analyze the data.
   FIRST judges, mentors and sponsors.

4. Explain how and when the assessment results will be shared with the department and other involved faculty.
   Debriefing meeting.

5. Describe any additional assistance the department will require to complete this assessment.

Reviewer	Print Name	Signature	Date
Department Chair/Area Director	Gary Schultz	Gary L Schultz	3/29/05
Dean	Granville Lee	G. W. Lee	3/28/05
Vice President of Instruction ☐ **Approved for Development** ☐ **Final Approval**		Roger M. Paley	4/4/05
President		Cheryl Whitworth	4/4/05
Board Approval			

Industrial, Manufacturing, & Automation Technology

Automation Technology (CTAMTC)
Certificate

'UNDER CONSTRUCTION'

Program Effective Term: Fall 2005

This program prepares students with the knowledge, skills, and attitudes needed for further advancement into science, technology, and engineering careers. Students will also be prepared to participate in the For Inspiration and Recognition in Science and Technology (FIRST) regional competition and championship events. The capstone course for this program culminates in the hands-on building of a robot used in competition.

Major/Area Requirements		**(16 credits)**
MTH 152	Technical Geometry and Trigonometry	4
PHY 110	Applied Physics	4
ROB 121	Robotics I	4
ROB 170	FIRST Robotics Competition	4

Minimum Credits Required for the Program **16**