Program Information Report

Transfer and University Parallel Programs

If your goal is to continue your education toward a baccalaureate degree, then transfer and university parallel programs is the track for you. Complete the first two years of study in a supportive environment with small classes and personal attention.

Before beginning any transfer program, a student should consult with an academic advisor or counselor to obtain a program articulation agreement or a transfer guide. Early in the program, the student should contact an undergraduate advisor at the transfer college for specific admission and curriculum requirements and, if available, an unofficial transfer-credit evaluation.

Copies of articulation agreements and transfer guides are available in the Counseling Office on the second floor of the Student Center Building. Computers with access to the Internet Web sites of four-year colleges and universities are also available there.

Pre-Engineering/Physics

Students utilize this program in preparation for a degree in engineering or physics.

Pre-Engineering Science Transfer (ASPET)

Associate in Science Degree

Program Effective Term: Fall 2018

This program addresses the increasing need of students pursuing STEM fields,specifically engineering. Students in this program will have their coursework pre-planned with specific courses laying the groundwork for successful transfer to a four year engineering program.

Program Admission Requirements:
-Students below Math Level 7 will need to take prerequisite courses.
-Students may need additional prerequisite coursework for CEM and PHY courses.

First Semester		(16 credits)
CEM 111	General Chemistry I	4
ENG 111	Composition I	4
MTH 191	Calculus I*	5
	Soc. Sci. 1 Elective(s)	3

Second Semester		(14 credits)
CEM 122	General Chemistry II	4
ENG 226	Composition II	3
MTH 192	Calculus II	4
	Arts/Human. 1 Elective(s)	3

Third Semester		(16 credits)
CPS 141 or	Introduction to Programming Using Python	
CPS 171	Introduction to Programming with C++	4
PHY 211	Analytical Physics I**	5
	Restricted Math Elective 1***	4
	Soc. Sci. 2 Elective(s)	3

Fourth Semester		(15 credits)
COM 101	Fundamentals of Speaking	3
PHY 222	Analytical Physics II	5
	Restricted Math Elective 2***	4
	Arts/Human. 2 Elective(s)	3

Minimum Credits Required for the Program: **61**

Notes:

**Students below Math Level 7 will need to take prerequisite courses.*
***Students who have not completed a year of High School Physics will need to complete PHY 111.*
****Math restricted elective select two from: MTH 197, MTH 293, MTH 295.*

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 for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

Program Name:	Pre-Engineering Science Transfer (ASPET) *Program Re-Activation*	**Program Code:** ASPET
Division and Department:	Arts and Sciences; Physical Sciences	
Type of Award:	☐ AA ☒ AS ☐ AAS ☐ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Comp.	
Effective Term/Year:	Fall 2018	**CIP Code:** 14.0102
Initiator:	Tracy Schwab	

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.	This program is being reactivated from 2008. This reactivation and modification is due in part to the increasing student demand for pre-engineering courses. Students will complete general education requirements (19 credits), along with 42 credits preparing them to transfer into a four-year engineering institution. No special criteria are required for enrollment into this program as long as prerequisite courses are taken. This program will utilize existing courses that have already been reviewed and articulated to four year colleges and universities. Potential Enrollment: We project approximately 10-20 students will be enrolled in this program during any given year. This number is based on student interest and attendance at engineering presentations held on campus.
Need Need for the program with evidence to support the stated need.	This program is intended to increase the number of students transferring to four year schools with their WCC associates degree. This program has been modified from a previous program (ASPET: Pre-Engineering Science Transfer) to include the necessary courses in order to successfully transfer to an engineering program. This ensures that students are not taking unnecessary courses which increase cost and time.

Program Outcomes/Assessment	Outcomes	Assessment method
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.	1. Transfer successfully to a four-year engineering program. 2. Apply scientific principles and mathematical calculations to solve problems and draw reasonable conclusions.	1. Transfer information will be obtained from several sources including WCC Institutional Research department and alumni surveys. 2. Current departmental final exam in Analytical Physics II will be used.

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Curriculum

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.

ASMSAS Physics/Pre-Engineering (PENG) needs to be inactivated

First Semester

Class	Title	Credits
CEM 111	General Chemistry I	4
MTH 191	Calculus I *	5
ENG 111	Composition I	4
Elective(s)	Social and Behavioral Science	3
Total		16

Second Semester

Class	Title	Credits
CEM 122	General Chemistry II	4
MTH 192	Calculus II	4
ENG 226	Composition II	3
Elective(s)	Arts and Humanities	3
Total		14

Third Semester

Class	Title	Credits
Elective(s)	Social and Behavioral Science	3
Elective	Math Restricted Elective ***	4
CPS 171	Programming ~~in C++~~ Introduction to Programming in C++	4
PHY 211	Analytical Physics I **	5
Total		16

Fourth Semester

Class	Title	Credits
COM 101	Fundamentals of Speaking	3
Elective	Math Restricted Elective ***	4
PHY 222	Analytical Physics II	5
Elective(s)	Arts and Humanities	3
Total		15
Total Credits Required		61

*** Students below Math Level 7 will need to take prerequisite courses**

****Students who haven't completed a year of High School Physics will need to complete PHY 111 ~~and PHY 122~~**

***** Math Restricted elective, select two of MTH 197, MTH 293 or MTH 295**

or CPS 141 Introduction to Programming using Python

jlg 3/23/18 per Dean

Budget Specify program costs in the following areas, per academic year:		START-UP COSTS	ONGOING COSTS
	Faculty	$ 0.	$ 0.
	Training/Travel	0.	0.
	Materials/Resources	0.	0.
	Facilities/Equipment	0.	0.
	Other	0.	0.
	TOTALS:	$ 0.	$ 0.
Program Description for Catalog and Web site	This program addresses the increasing need of students pursuing STEM fields, specifically engineering. Students in this program will have their coursework pre-planned with specific ~~coursework~~ courses laying the groundwork for successful transfer to a four year engineering program.		
	Accreditation/Licensure - None **Advisors – Kathy Butcher** **Advisory Committee - None** **Admission requirements – None** **Articulation agreements – TBD** **Continuing eligibility requirements None**		

Assessment plan:

Program outcomes to be assessed	Assessment tool	When assessment will take place	Courses/other populations	Number students to be assessed
Transfer successfully to a four-year engineering program.	Transfer data	Fall 2021 followed by every three years.	All	All
Apply scientific principles and mathematical calculations to solve problems and draw reasonable conclusions.	Departmental final exam will be used.	Fall 2021 followed by every three years.	All program students in PHY 222	All

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, external evaluation, other). Attach the rubric.

   Outcome 1: No rubric is required to gather student transfer data.

Outcome 2: For Analytical Physics II: All students in this course will take the final assessment exam using a departmentally developed rubric. Departmental faculty will score the exams.

2. Indicate the standard of success to be used for this assessment.

Outcome 1: 70% of students who have enrolled in this program will successfully transfer to a four-year engineering program.

Outcome 2: For Analytical Physics II: The standard of success is that 75% of students assessed will achieve a score of 2.5 or higher (out of 4) on the departmental exam.

3. Indicate who will score and analyze the data.

Outcome 1: Physical Science Faculty will analyze the data.
Outcome 2: Physical Science Faculty will analyze the Analytical Physics II data.

REVIEWER	PRINT NAME	SIGNATURE	DATE
Department Chair/Area Director	Kathy Butcher	Kathleen Butcher	10-1-17
Dean	Kris Good	Kris Good	10-2-17
Curriculum Committee Chair	~~David Wooten~~ Lisa Veasey	Lisa Veasey	11/13/17
Vice President for Instruction ☐ Approved for Development ☐ Final Approval	Kimberly Hurns		11/15/17
President	Rose Bellanca	RB Bellanca	1/21/18
Board Approval			2/27/18