Name: _____   **Date**: _____

Department: _____

COCC Contact Information: _____

Use the instructions for this document to complete your presentation checklist; then e-mail your completed presentation checklist (*not* the instructions) to the Academic Affairs chair by his or her specified deadline. **Please note:** If an item listed is not relevant to your specific presentation to Academic Affairs, please mark as **N/A**. Use as many pages as necessary.

PROPOSAL OVERVIEW

TYPE OF AGENDA ITEM

☐ Information Item (requires approval of AA Chair)

☐ Action Item

    ☐ Information and committee feedback

    ☐ Procedure—revision   (Attach current procedure with proposed changes illustrated with track changes)

    ☐ Procedure—new

    Identify suggested location in *GPM*: _____

    ☐ Policy—revision (Attach current policy with proposed changes illustrated with track changes)

    ☐ Policy—new

    Identify suggested location in *GPM*:_____

    ☐ New academic program (Complete only items #1 and #2 on this form and attach stage 2 document.)

    ☐ Other:_____

BUDGET

INSTRUCTIONAL REQUIREMENTS

OPERATIONAL NEEDS, CURRENT AND FUTURE

STUDENT IMPACT

ANTICIPATED IMPLEMENTATION TIMELINE

COCC NEW PROGRAM PROPOSAL:
GEOSPATIAL SCIENCE (OSU EMPHASIS) ASSOCIATE OF SCIENCE

(Refer to Instructions for New Program Process)

Name of lead proposer: Patrick Kennelly
Date of Submission to Curriculum Office: September 23, 2020 (revised 10/2/20)

NEW PROGRAM PROPOSAL APPROVAL

Each approver needs to enter their initials and the date, save, and forward to the next approver (and copy the Curriculum and Assessment Office).

Curriculum Office:
☒ Form is complete and incorporates feedback from the concept worksheet.
☒ Program proposal meets state and NWCCU requirements.
Notes from Curriculum Office:
Excellent collaboration with OSU for this AS program.
CO Approved by and Date forwarded to dean: VViles, forwarded on 10/2/2020

Dean:
☒ Confirming the resource and impact descriptions are accurate.
☒ Confirming the need description is accurate and the demand is sufficient.
☒ Confirming the department and discipline have the capacity to development the program.
Notes from the dean:
Dean approved by and date forwarded to VPI: Michael Fisher, forwarded on October 6, 2020

VPI:
☒ Confirming COCC capacity and alignment of program to COCC mission and strategic direction.
Notes from the VPI:
VPI Approved by and date forwarded to Academic Affairs: Betsy Julian, forwarded on 10/12/20

Academic Affairs (Chair):
☐ Confirming complete proposal meets COCC, state, and NWCCU standards.
☐ Confirming that COCC has the capacity to offer the program.
☐ Confirming that the evidence of need is substantial and aligns with the purpose of transfer or CTE programs.
Notes from AA Chair:
Academic Affairs approved by and date forwarded: Click here to enter name and date.

1. List the program title, award (1.), and outcomes (3.D.1.)).
   Geospatial Science (OSU emphasis) Associate of Science
   General Education Outcomes
   Arts & Letters
   1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
   2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.
   Cultural Literacy
   1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.
   Health
   1. Explain the relationship between human behavior and health.
   Mathematics
   1. Use appropriate mathematics to solve problems; and
   2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.
   Science or Computer Science
   1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
   2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
   3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.
   Social Science
   1. Apply analytical skills to social phenomena in order to understand human behavior; and
   2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.
   Speech/Oral Communication
   1. Engage in ethical communication processes that accomplish goals;
   2. Respond to the needs of diverse audiences and contexts; and
   3. Build and manage relationships.
   Writing and Information Literacy
   1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
   2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
   3. Demonstrate appropriate reasoning in response to complex issues.

2. Identify the type of new program (2.)
   a. If this is "not a significant departure" (2.B.), "replacement of a current program" (2.C.), or "substantial revision" (2.D.) then identify appropriate programs.

This is a new program that is not a significant departure from the previously approved GIS AAS degree program.

EVIDENCE OF NEED

Evidence of Need Detail

1. Identify the purpose of the program (3.D.1.).
   The COCC AS degree would be especially beneficial to COCC GIS graduates who work full-time in the geospatial technology industry, allowing them to complete a Bachelor's degree.

2. List either job titles for a CTE program or transfer universities if you propose a transfer program. (3.D.1.)
   The primary target is the OSU BS in Geography and Geospatial Science. Other majors/universities that offer similar majors is the BS in Geomatics at Oregon Institute of Technology, and the BS in Spatial Data Science and Technology at the University of Oregon.
   a. For CTE programs, attach occupational profiles* to your submission.

3. Who is your target population?* (3.A.1.)
   Note: please include whether your program is primarily providing a completion point for existing students or if it is primarily intended to attract new students. If your program is intended to bring in new students, you will need to address the capacity of the discipline to support new students below.
   We would offer this as primarily online and hybrid courses to prepare students to complete their BS in an online program if they were so inclined. We could coordinate these efforts with OSU or other programs to address issues or concerns they have with the level of preparation of students to learn effectively in the online environment.

Evidence of Need Summary* (2.a.iii. or 2.b.)

Evidence for the need for this program include:
1) GIS continues to grow as an industry. The Department of Labor's O*NET OnLine site describes the positions of Geospatial Information Scientists and Technologists (15-1199.04) and Remote Sensing Scientists and Technologists (19-2099.01), and expects these employment sectors to grow between 5-9% by 2026 (https://www.onetonline.org/find/quick?s=geospatial).
2) While current COCC GIS programs prepare students to enter the workforce, the vast majority of GIS jobs are staffed by workers with Bachelor's degrees or higher. URISA's 2017 GIS Salary Survey indicates that most respondents (90.9% of the 3,060 responders) hold a bachelor's or higher, and a majority (68.8%) indicate the minimum level of education required for their position is a Bachelor's degree.
(https://www.urisa.org/clientuploads/directory/Documents/Books%20and%20Quick%20Study/URISA2017_GISSalary%20SurveyExecSummary.pdf).
3)Current COCC GIS CTE degrees were not designed to optimize transfer to bachelor's programs. The new AS degree, by combining courses from GIS, Geography, and other disciplines will be designed to help students complete a bachelor's program more efficiently.
4)In conversations with current students of the GIS AAS and CC programs, they express an interest in eventually pursuing a higher degree in addition to joining the workforce. During conversations with COCC GIS graduates having earned or currently working on more advanced degrees in GIS while employed, those graduates acknowledge the merits of the proposed program.

COLLABORATION

Collaboration Detail

1. If transfer program, list regional stakeholders who have participated in this program development and attach letters of support.
   Potential List of Regional Stakeholders:
   Oregon State University
   Oregon Institute of Technology
   University of Oregon
   Portland State University
   COCC GIS Advisory Committee

   If CTE program, include Advisory Board Support
   a. All CTE programs must have an advisory board
      i. If the discipline has a current advisory board, please attach a letter of from the committee highlighting needs for the program and affirming support.
   ii. If the discipline does not have a current advisory board, identify regional stakeholders (and potential future advisor board members) who have participated in this program development.

Collaboration Summary * (3.B.1.)

This program is intended to be aligned with OSU's major in BS in Geography and Geospatial Science, so Oregon State University is a primary stakeholder. Although this is a transfer program, the COCC GIS Advisory Committee will be a useful sounding board for maintaining and improving the program in the future. Other stakeholders may include: Oregon Institute of Technology, University of Oregon, and Portland State University.

ALIGNMENT

Alignment Detail

1. Strategic Alignment
   a. Identify the alignment of this program to COCC's mission.
      This program aligns with the COCC mission by helping Central Oregon students to complete their academic goals by offering a STEM-discipline Associates of Science program at COCC and preparing students to pursue a related bachelor's program at Oregon State University.

   b. Identify the alignment of this program to any other College initiatives (Strategic Plan, Academic Master Plan, etc.)
      This program aligns with COCC strategic planning goals of student success by offering a hybrid program designed to facilitate increased student persistence in support of achieving educational goals, while preparing students for a fully online bachelor's experience at Oregon State University.

   c. Identify any other alignments (such as HECC/CCWD priorities, state or national workforce investment initiatives, Pre-K-12 projects.)

2. Specialized Accreditation
    a. Is there an accreditation association that aligns with this program? If yes,
        i. Identify the agency/agencies
           There is currently no specialized board of accreditation for GIS or geospatial science, or other associated disciplines.
        ii. If you are already accredited, will you include this program under current specialized accreditation?

        iii. Will you pursue initial accreditation with an agency?
            1. If no, why not?
            2. If yes, what is the projected cost (budget and time) to participate in the accreditation process?

Alignment Summary* (3.C.)
This proposal aligns with COCC's mission of promoting student success by providing quality, accessible educational opportunities as well as with COCC's strategic planning goal associated with student success. While there is no accrediting body appropriate for this program, it is designed to align with the Geospatial Technology Competency Model, a framework developed through collaboration of the Employment and Training Association (ETA), the GeoTech Center, and industry experts.

DESIGN

Design Detail

1. If you are proposing a CTE program,
    a. List the student learning outcomes (3.D.1.).

    b. Provide the program assessment plan and schedule. For each program outcome, identify the course that represents the highest level of achievement of the outcome, the measurement that will be used to collect student evidence of achievement, and the term/year each outcome assessment will be reported.

2. Course requirements (subject, course number, title, credits presented in a sample plan format followed by program credit total; identify any new courses in yellow highlight.) (3.D.2.)
   From CourseLeaf:
   Sample Plan

First Year		
FALL		**CREDITS**
GEOG 101	New course GEOG 101 Science of Mapping	4

GEOG 201 or GEOG 202	World Regional Geography I World Regional Geography II	4
MTH 111	College Algebra	4
Writing I	From list of WR I courses	4
	Credits	**16**
WINTER		
GEOG 107	Cultural Geography	4
MTH 112	Trigonometry	4
WR II	From list of WR II courses	4
Elective		3
	Credits	**15**
SPRING		
GEOG 265	Geographic Information Systems	4
GEOG 278 or GEOG 279 or G 202	Physical Geography-Landforms and Water Physical Geography-Weather and Climate Geology II	4
Elective		3
Elective		4
	Credits	**15**
Second Year		
FALL		
Biological Science	From list of Biological Science courses	4-5
Elective		3
Elective		3
Elective		4
	Credits	**14-15**
WINTER		
GEOG 211	Computer Cartography	4
Fitness	From list of Fitness courses	3
Elective		3
Elective		3
Elective		3
	Credits	**16**
SPRING		
GEOG 286	Remote Sensing	5
Elective		3
Elective		3
Elective		3
	Credits	**14**
	Total Credits	**90-91**

3. Primary delivery method* (3.D.3.)
   We will offer this as primarily hybrid courses to prepare students to complete their BS in an online program if they were so inclined. We could coordinate these efforts with OSU or other programs to address issues or concerns they have with the level of preparation of students to learn effectively in the online environment.

4. Entrance and enrollment options (3.D.4. and 3.D.5.)
   This program will have recommended preparation into first term. It will also offer rolling entry, where students can begin any term except summer. Students will have both part-time and full-time attendance options available.

Design Summary* (3.D.)
This proposal is for an AS degree designed to transfer to OSU. It can be completed over two years in six terms. Courses will be delivered largely in a hybrid format. This program will have recommended preparation and rolling entrance.

CAPACITY

Capacity Detail (3.E.)
1. Target audience
   a. Primarily new or existing students (from Evidence of Need, 3. Above)?
      The target audience is new students.
2. Enrollment projection
   b. Projected enrollment in first 1-3 years
      First year: 3
      Second year: 5
      Projected enrollment of mature program* (identified as a number, not a range): 10

3. Impact on faculty resource.
   a. Identify program director, if applicable.
   b. Identify new or reallocated section assignments.
      The one new course proposed in this program, GEOG 101 – The Science of Mapping, will require additional sections. Other courses will be taught in existing sections.

4. Impact to load
   c. Identify one-time load impacts associated with implementation
      Additional load for initially one course per year will be associated with this program. The capacity in other courses should be able to accommodate the additional AS students without an increase in load.
   d. Identify on-going load impacts (program director, reassignment, etc.)

5. Impact to facilities, technology, and/or equipment
      Current GIS program facilities technology and equipment will be adequate to fill any increased capacity.

6. Impact to discipline/department and administrative assistant
      This new program will have some impact on the GIS Program Director, but minimal impact on the Department and its Administrative Assistant.

7. Budget (*certain types of changes must submit a formal budget to NWCCU)
   e. Expenses
      i. Use the table below to identify 1) all current resource and budget requirements that will be **redirected** to this program (R in the table below) and 2) all **new** resource and budget expenses needed for this program (N in the table below.) If

an expense is ongoing, reflect it in each year so you are displaying the cumulative expense.

	$ needed Year 1		$ needed Year 2		$ needed Year 3	
	R	N	R	N	R	N
Personnel		$3,000		$3,000		$6,000
Equipment	0	0	0	0	0	0
Technology- Hardware	0	0	0	0	0	0
Technology- Software	0	0	0	0	0	0
Materials/Supplies	0	0	0	0	0	0
Curriculum or Online Development		$1,200				
Other Capital Expenditures	0	0	0	0	0	0
External accreditation for program	0	0	0	0	0	0
TOTALS						

8. Revenue
   i. Identify any new course or program fees proposed in conjunction with this program.

   ii. Identify any other resources (grants, outside funding) that the College will be able to dedicate to expenses related to this program

Personnel costs result from additional load for one course and may be covered within existing budget, or may need additional funding to cover the cost approximated at $3,000 per year. Funding for online development is provided by COCC per Faculty Collective Bargaining Agreement and is approximated here at $1,200.

9. Program cost and scholarships
   a. Identify any special aid, scholarship, or resources available to students*

10. Other impacts: Identify impacts to the following areas:

Area or department	Identify impact
Policy impacts (new or changes to policies required as a result of this program)	None
Admissions and Records	New program awareness and promotion to prospective students.
Advising	New program awareness and promotion to prospective students. Understanding how this differs from the existing AAS in GIS and AAOT in Geography programs.
Bookstore	One additional book order for newly proposed course
Campus Services	None
College Now	None
Marketing and Public Relations	Promote new program.
Financial Aid	None

Information Technology Services	No changes. The licensing and installation of GIS software will remain the same as it is for existing programs.
Library	Order textbook for the newly proposed course.
Risk Management (contracts, new field-based experiences)	None
Tutoring and Testing	GIS tutor duties may increase.

Capacity Summary*
There are no significant impacts to supporting COCC departments and services as a result of this proposal.

IMPLEMENTATION TIMELINE AND TARGETED EFFECTIVE TERM

1. Identify the desired effective term (new programs align with the academic year which begins in fall.)
   Effective term: Fall 2021
2. Proposal timeline:

Step	Notes	Deadline
1. Worksheet		
Concept Worksheet		Submitted 3/2/20
2. Concept workshop		
Workshop	Dean, Chair, VPI, Curriculum Office discuss proposal and provide guidance for Program Proposal	May 6, 2020
3. Program Proposal		
Academic Affairs review	Submit to Curriculum office (with chair approval)	Oct. 1, 2020 (est. Oct. 19 mtg)
4. Curriculum Proposal		
Submit into Courseleaf CIM	All new courses and course edits associated with the new program, and new program entered into CL, and submitted	Nov. 20, 2020
Curriculum Committee review		January-March (two readings)
Catalog	Include in next 2020-21 Catalog, include "Pending approval" if final external approval below not complete by publishing date.	March, 2021
5. External Approval		
Board of Directors	Curriculum Office submits. Meet 2nd W, material due 10 days prior, est. 1 month	Estimate March meeting, material due end of Feb.