Virginia Space Grant Consortium (VSGC)
GeoTEd-UAS (NSF DUE #1601614; #2000715)
Virginia Pilot Pathways Program (FAA Aviation Workforce Development Grants, 2021-23)

UAS Faculty Teacher Professional Development
Sample Compilation of Existing Small UAS/Drone Instructional Resources
Contact: Chris Carter, VSGC Director, cxcarter@odu.edu, 757-766-5210.

[sUAS Manual Flight Exercises: Practice Flight Drills for New Drone Pilots](#) (2022)- This resource provides new drone operators with some practice exercises that are designed to help them to hone their flight skills. The manual also includes a brief overview of sUAS rules and regulations and provides other safety considerations for operating (and instructing). 26 pages | 5 MB

[Observing Our Natural World with sUAS](#) (2023) – This document provides a compendium of learning lessons in natural resources that are geared towards middle and high school educators. This resource is intended to be provided 'cafeteria style' whereby educators can select the modules and exercises that best target their needs.   92 pages | 5 MB

[An Introduction to Precision Agriculture: An Educators Guide to Agricultural Earth Observation](#) (2022) – This document serves as an educator's guide to agricultural earth observation, and introduces precision agricultural concepts, and integrates exercises and learning lessons. This guide was developed for middle school agricultural technology teachers and 4-H educators in mind. Components of this manual could also be integrated into high school agricultural technology curriculum. This resource is intended to be provided 'cafeteria style' whereby educators can select the modules and exercises that best target their needs.   99 pages | 42 MB

[Exploring Drone Imagery through Open Drone Map (ODM) - A Tutorial and Exercise Handbook for Educators](#) (2023) - There are many software options available to process drone imagery. Traditionally, these options have been expensive to purchase, and/or may include annual maintenance costs. In addition, some software options are complicated to operate. Open Drone Map (ODM) is a potential software solution for educators and professionals who are seeking an affordable entry to process imagery collected by drones. ODM software also includes a viewer, that enables users to explore their processed imagery in both 2D and 3D.

[Making Measurements in Your 3D Image Mosaic](#) (2023) - Explore some of the tools associated with the 3D Model in WebODM.

Virginia Geospatial Extension – Mapping With Drones – Practice Exam for Part 107
https://forms.gle/vWmuxnQM4YaRAyVw6

Virginia Geospatial Extension - Small UAS Flight Planning Video Series
https://www.youtube.com/playlist?list=PLkV8CNVuB_rJJa6IKVdJWRTdbAUGCOHA2

Virginia Geospatial Extension - Mastering the Aeronautical Charts for UAS Operators
https://www.youtube.com/playlist?list=PLEHyYp32cIJH3E-4mPIbg6DxUCVxHnixs

Virginia Geospatial Extension – Books and eBooks
https://virginiaview.cnre.vt.edu/books/

Virginia Geospatial Extension – Sample Checklists and Other Docs
https://virginiaview.cnre.vt.edu/drones/

Virginia Geospatial Extension – Youtube Play List
https://www.youtube.com/user/VaGeoExtension/playlists

Virginia Geospatial Extension – Drone and Geospatial Data Software and Apps List
https://virginiaview.cnre.vt.edu/software-apps/#software

Teaching with Topos – This resource was developed through GeoTEd-UAS and provides an introduction to Topographic maps, through a series of learning lessons and activities. This is most appropriate for older middle schoolers or early high school ages (or 4-H).
- o Teaching Topos – Participant Handbook
- o Teaching Topos – Leaders Guide

Exploring Our Planet with Open Source Software– This resource provides an overview of open source software that is used for mapping and analysis, and includes instructions and learning opportunities for Google Earth, National Geographic MapMaker, and OpenStreet Map.

Working with Google Earth Pro– This manual provides step by step instruction for GoogleEarth Pro. There may be more to GE Pro than you realize!