

4269-28541:EECS 800 Special Topics: Synthetic Aperture Radar LEC

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Class Schedule

Office hours booking  (<https://bookings.cloud.microsoft/bookings/homepage?calendar=EECS800SAR@mail.ku.edu&action=goto&src=mail-goto>) [Office Hours Booking Page](#)  (<https://outlook.office.com/book/EECS800SAR@mail.ku.edu/?ismsaljsauthenabed>)

Classroom zoom  (<https://kansas.zoom.us/j/7182982593>) <https://kansas.zoom.us/j/88110743620>  (<https://kansas.zoom.us/j/88110743620>)

Zoom Passcode: 1136 <-- SAME AS THE LEARNED HALL ROOM NUMBER

SAR

Aug 25: Learned 1136 - Radar Simulator
Aug 27: Learned 1136 - Radar Simulator
Sept 1: Zoom - Radar Simulator Homework
Sept 3: Learned 1136 - Time Domain Correlation Algorithm
Sept 8: Zoom - Time Domain Correlation Algorithm
Sept 10: Zoom - Time Domain Correlation Algorithm Homework
Sept 15: Learned 1136 - Range Doppler Algorithm
Sept 17: Learned 1136 - Range Doppler Algorithm
Sept 22: Zoom - Range Doppler Algorithm Homework
Sept 24: Learned 1136 - Chirp Scaling Algorithm
Sept 29: Learned 1136 - Chirp Scaling Algorithm
Oct 1: Zoom - Chirp Scaling Algorithm Homework
Oct 6: Learned 1136 - Frequency-Wavenumber (f-k) Algorithm
Oct 8: Learned 1136 - Frequency-Wavenumber (f-k) Algorithm
Oct 13: Zoom - Frequency-Wavenumber (f-k) Algorithm Homework
Oct 15: Learned 1136 - Polar Format Algorithm
Oct 20: FALL BREAK
Oct 22: Zoom - Polar Format Homework

INSAR

Oct 27: Learned 1136 - Coregistration Algorithm

Oct 29: Learned 1136 - Coregistration Algorithm



3: Zoom - Coregistration Homework

Nov 5: Learned 1136 - Phase Unwrapping Algorithm

Nov 10: Learned 1136 - Phase Unwrapping Algorithm

Nov 12: Zoom - Phase Unwrapping Algorithm Homework

Nov 17: Learned 1136 - Baseline Estimation Algorithm

Nov 19: Zoom - Baseline Estimation Algorithm Homework

Nov 24: Learned 1136 - SAR Tomography Algorithm

Nov 26: THANKSGIVING BREAK

Dec 1: Zoom - SAR Tomography Algorithm

Dec 3: Zoom - SAR Tomography Algorithm Homework

Dec 8: Learned 1136 - Final project presentations (12 min each, 15 min total)

Dec 10: Learned 1136 - Final project presentations (12 min each, 15 min total)

Dec 11: STOP DAY

Dec 18: Final Projects due by 10AM CDT

Git Resources

A guide to git (I highly recommend reading this or watching some tutorial videos if you have not used git before):

<https://gitlab.com/openpolarradar/opr/-/wikis/Git#getting-started>

[_https://gitlab.com/openpolarradar/opr/-/wikis/Git#getting-started\)_](https://gitlab.com/openpolarradar/opr/-/wikis/Git#getting-started)

Matlab Info

The required Matlab toolboxes are Image Processing, Mapping, and Signal Processing.

IT Quick Links (only needed if we end up using the OPR HPC resources)

Open Polar Radar cluster resources (including how to connect):

<https://gitlab.com/cresispub/cresis-wiki/-/wikis/Cluster> [_https://gitlab.com/cresispub/cresis-wiki/-/wikis/Cluster\)_](https://gitlab.com/cresispub/cresis-wiki/-/wikis/Cluster)

The Matlab (Open Polar Radar) Toolbox (see cluster page above for the specific steps to setup the toolbox on the cluster):

<https://gitlab.com/openpolarradar/opr/-/wikis/home> [_https://gitlab.com/openpolarradar/opr/-/wikis/home\)_](https://gitlab.com/openpolarradar/opr/-/wikis/home)

Open Polar Radar VPN

<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#ku-anywhere-vpn> 
(<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#ku-anywhere-vpn>)

Open Polar Radar Thinlinc

<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#thinlinc>  (<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#thinlinc>)

Open Polar Radar Copying Files

<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#external-data-transfers> 
(<https://gitlab.com/cresispub/cresis-wiki/-/wikis/IT#external-data-transfers>)

General

[MicrosoftEquationEditorShortcutCommands.pdf](#)
(<https://canvas.ku.edu/courses/204313/modules/items/4872665>)

[University of Kansas - Overleaf, Online LaTeX Editor](#)  (<https://www.overleaf.com/edu/kansas>)

Course Summary:

Date	Details	Due
Wed Aug 26, 2026	 Course expectations and goals (https://canvas.ku.edu/courses/204313/assignments/1461072) 	due by 11:59pm
Fri Sep 11, 2026	 Radar Simulator (https://canvas.ku.edu/courses/204313/assignments/1461076) 	due by 11:59pm
Thu Sep 17, 2026	 Time Domain Correlation SAR (https://canvas.ku.edu/courses/204313/assignments/1461078) 	due by 11:59pm
Mon Sep 28, 2026	 Range Doppler Algorithm (RDA) SAR Processor (https://canvas.ku.edu/courses/204313/assignments/1461077) 	due by 11:59pm
Fri Oct 9, 2026	 Chirp Scaling Algorithm (CSA) SAR Processor	due by 11:59pm

Date	Details	Due
	(https://canvas.ku.edu/courses/204313/assignments/1461070)  	
Fri Oct 16, 2026	 Frequency Wavenumber Migration (f-k migration) SAR Processor (https://canvas.ku.edu/courses/204313/assignments/1461074) 	due by 11:59pm
Fri Nov 6, 2026	 Coregistration (https://canvas.ku.edu/courses/204313/assignments/1461071) 	due by 11:59pm
Fri Nov 13, 2026	 Phase Unwrapping (https://canvas.ku.edu/courses/204313/assignments/1461075) 	due by 11:59pm
Tue Dec 22, 2026	 Final Project (https://canvas.ku.edu/courses/204313/assignments/1461073) 	due by 11:59pm
	 EECS-800 SAR HW1 Radar Simulator (https://canvas.ku.edu/courses/204313/assignments/1473805) 	