

## Fundamental Satellite Based Positioning Autumn 2011

Date	Time	Contents	Pages	M-files
23/9	10:15-12:00	The System, GPS Time	297-313, intro_GPS.pdf	easy1, comptime, doy, get_eph, gps_time, julday, satconst
14/10	10:15-12:00	Keplerian Orbit, Computation of Satellite Position	easy1-sol.pdf, 316-321	easy2, check_t, edata, find_eph, run, satpos
28/10	10:15-12:00	Observables and Computation of Receiver Position	easy2-sol.pdf, 322-329	easy3
11/11	10:15-12:00	Error Sources	easy3-sol.pdf, 338-348	easy10, easy16
6/12	10:15-12:00	Mathematical Models for Positioning	easy4-sol.pdf, 382-391	baseline, easy3, easy4, recpo_1s, easy15
8/12	10:15-12:00	Dilution of Position, Topocentric Coordinates, Variance Transformation	334-337	easy9
9/12	9:00-10:45	Ambiguity resolution	397-409, 425-426, ambiguit.pdf	easy6, easy12
13/12	9:00-10:45	Real Time Kinematic GPS	-	rtk1
15/12	9:00-10:45	Frames	417-424	cart2geo, geo2cart, frgeod, togeod
16/12	9:00-10:45	Geoidal undulation	-	

The M-files can be downloaded from [gps.aau.dk/~borre/masters/gps](http://gps.aau.dk/~borre/masters/gps)

All lectures are given at Fredrik Bajers Vej 3, room 2-103, except on December 15 at Fredrik Bajers Vej 7, room B2-107.

### *Literature*

Kai Borre and Gilbert Strang: *Algorithms for Global Positioning*.  
Wellesley-Cambridge Press, 2012.