Hands-on: Python for Signal Processing

Signal Processing Essentials

- FFT analysis: Frequency domain transformation
- Filtering: Low-pass, high-pass, band-pass, Savitzky-Golay
- Noise reduction: Moving average, Wiener filter
- Feature extraction: Peak detection, integration, moments
- Deconvolution: Separate overlapping signals

```python
from scipy.signal import savgol_filter
smoothed = savgol_filter(data, window=11, polyorder=2)
```