

**GG4070 SUBMARINE GEOMORPHOLOGY**

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**\*\*PRELIMINARY SCHEDULE\*\***

**HT2025**

|                 |                | Format     | Content                                      | Room | Teacher                           | Literature<br>(Micallef et al. e-book) | Submitted work due                    |
|-----------------|----------------|------------|----------------------------------------------|------|-----------------------------------|----------------------------------------|---------------------------------------|
| Tues 2/12       | 10:00-10:45    | Lecture    | Course introduction                          | U13  | SG                                | Ch 1, 9; Conclusion                    |                                       |
|                 | 11:00-11:45    | Lecture    | Ocean basins                                 | U13  | SG                                |                                        |                                       |
|                 | 13:00-17:00    | Practical  | Exploring the seafloor                       | U13  | SG                                |                                        | Exploring the seafloor (non-assessed) |
| Wed 3/12        | 10:00-10:45    | Lecture    | Geophysical data collection                  | U13  | CB                                |                                        |                                       |
|                 | pm 13:00-14:00 | Guest talk | Seabed2030                                   | U13  | Martin Jakobsson, Stockholm Univ. |                                        |                                       |
|                 | 14:00-17:00    | Self       | Reading/self-study                           |      |                                   |                                        |                                       |
| Thur 4/12       | am 10:00-10:45 | Seminar    | Literature: ocean floor morphology           | U13  | SG, CB, MD                        | Harris et al. 2014                     |                                       |
|                 | 11:00-11:45    | Lecture    | DTM visualisation & analysis                 | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Practical  | GIS - DTM visualisation & analysis           | U13  | SG                                |                                        |                                       |
| Fri 5/12        | am 10:00-10:45 | Lecture    | Stress, strain & strength                    | U13  | SG                                |                                        |                                       |
|                 | 11:00-11:45    | Lecture    | Stress, strain & strength                    | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Practical  | Quiz - stress, strain & strength             | U13  | SG                                |                                        | Fluids quiz (non-assessed)            |
| Mon 8/12        | am 10:00-10:45 | Lecture    | Continental shelf landforms                  | U13  | SG                                | Ch 10, 11                              |                                       |
|                 | 11:00-11:45    | Lecture    | Continental shelf landforms                  | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Reading/self-study                           |      |                                   |                                        |                                       |
| Tues 9/12       | am 10:00-10:45 | Seminar    | Literature: current bedforms                 | U13  | SG, CB, MD                        | Boggild et al. 2024                    |                                       |
|                 | 11:00-11:45    | Lecture    | Canyon-channel-fans                          | U13  |                                   | Ch 14, 15                              |                                       |
|                 | pm 13:00-13:45 | Lecture    | Canyon-channel-fans                          | U13  |                                   |                                        |                                       |
|                 | 14:00-17:00    | Self       | Reading/self-study                           |      |                                   |                                        |                                       |
| Wed 10/12       | am 10:00-11:00 | Guest talk | To be confirmed                              |      |                                   |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Reading/self-study                           |      |                                   |                                        | DTM visualisations (non-assessed)     |
| Thur 11/12      | am 10:00-10:45 | Lecture    | Subglacial systems                           | U13  | SG                                | Ch 12                                  |                                       |
|                 | 11:00-11:45    | Lecture    | Subglacial systems                           | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading                          |      |                                   |                                        |                                       |
| Fri 12/12       | am 10:00-10:45 | Lecture    | Ice-ocean interface                          | U13  | SG                                | Ch 12                                  |                                       |
|                 | 11:00-11:45    | Lecture    | Ice-ocean interface                          | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading                          |      |                                   |                                        |                                       |
| Mon 15/12       | am 10:00-10:45 | Seminar    | Literature: glacial landforms                | U13  | SG, CB, MD                        | Livingstone/Jamieson et al. 2016       |                                       |
|                 | 11:00-11:45    | Practical  | Introduction to mapping project              | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-17:00 | Practical  | Introduction to mapping project              | U13  | SG                                |                                        |                                       |
| Tues 16/12      | am 10:00-10:45 | Lecture    | Landslides & seabed stability                | U13  | CB                                | Ch 13                                  |                                       |
|                 | 11:00-11:45    | Lecture    | Landslides & seabed stability                | U14  | CB                                |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
| Wed 17/12       | am 10:00-10:45 | Guest talk | Geomorphology for seafloor engineering       | U13  | Bartosz Kurjanski, Univ. Aberdeen |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
| Thur 18/12      | am 10:00-11:00 | Lecture    | Morphometry                                  | U13  | SG                                |                                        |                                       |
|                 | 11:15-11:45    | Practical  | Morphometry / mapping project                |      |                                   |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
| Fri 19/12       | am 10:00-12:00 | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
|                 | pm 13:00-17:00 | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
| CHRISTMAS BREAK |                |            |                                              |      |                                   |                                        |                                       |
| Mon 5/1         | am             | --         | --                                           | --   | --                                |                                        |                                       |
|                 | pm             | --         | --                                           | --   | --                                |                                        |                                       |
| Tues 6/1        | am             |            |                                              |      |                                   |                                        |                                       |
|                 | pm             |            |                                              |      |                                   |                                        |                                       |
| Wed 7/1         | am 10:00-11:45 | Seminar    | Group discussions of mapping project         | U13  | SG                                |                                        |                                       |
|                 | pm 13:00-16:00 | Seminar    | Group presentations of mapping areas         | U13  | SG                                |                                        |                                       |
| Thur 8/1        | am             | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
|                 | pm             | Self       | Self-study: reading, mapping project         |      |                                   |                                        |                                       |
| Fri 9/1         | am 10:00-10:45 | Lecture    | Sea level change / palaeo-reconstructions    | U13  | SG                                |                                        |                                       |
|                 | 11:00-11:45    | Lecture    | Sea level change / palaeo-reconstructions    | U13  | SG                                |                                        |                                       |
|                 | pm             | Self       | Self-study: reading, mapping project         |      |                                   |                                        | Submit mapping project Sunday 23:59   |
| Mon 12/1        | am 10:00-12:00 | Self       | Self-study: reading                          |      |                                   |                                        |                                       |
|                 | pm 13:00-13:45 | Seminar    | Literature: sea level/palaeo-reconstructions | U13  | SG, CB, MD                        | Covault & Graham 2010                  |                                       |
|                 | 14:00-15:30    | Lecture    | Drivers of geomorphic change, outlook        | U13  | SG                                | Ch 9, Conclusion                       |                                       |
| Tues 13/1       | am             |            |                                              |      |                                   |                                        |                                       |
|                 | pm             | Self       | Exam prep                                    |      |                                   |                                        |                                       |
| Wed 14/1        | am             |            |                                              |      |                                   |                                        |                                       |
|                 | pm             | Self       | Exam prep                                    |      |                                   |                                        |                                       |
| Thur 15/1       | am             |            |                                              |      |                                   |                                        |                                       |
|                 | pm             | Self       | Exam prep                                    |      |                                   |                                        |                                       |
| Fri 16/1        | am 09:00-12:00 |            | Exam                                         |      |                                   |                                        |                                       |

**Course book (e-book)**

Micallef et al. 2018. Submarine Geomorphology. <https://libris.kb.se/bib/21668267> and <https://doi.org/10.1007/978-3-319-57852-1>

Other literature will be provided in class.