

COMP5821M

Module Reading List

Geometric Processing, 2021/22, Semester 1

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Tutor information is taken from the Module Catalogue

[\(<http://webprod3.leeds.ac.uk/catalogue/dynmodules.asp?Y=202122&M=COMP-5821M>\)](http://webprod3.leeds.ac.uk/catalogue/dynmodules.asp?Y=202122&M=COMP-5821M)

The principal text for this module is:

Botsch, Kobbelt et al, *Polygon Mesh Processing*

[\(\[https://leeds.primo.exlibrisgroup.com/discovery/search?\]\(https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991019588047705181&tab=AlmostEverything&search_scope=My_Inst_CI_not\)](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991019588047705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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Peters, 2010

Some material may also be drawn from:

Akenine-Möller, Haines & Hoffman, *Real-Time Rendering*

[\(\[https://leeds.primo.exlibrisgroup.com/discovery/search?\]\(https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991004325429705181&tab=AlmostEverything&search_scope=My_Inst_CI_not\)](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991004325429705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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(Fourth Edition), CRC Press (used for COMP 5822M High-Performance Graphics)

Hughes, van Dam et al, *Computer Graphics*

[\(\[https://leeds.primo.exlibrisgroup.com/discovery/search?\]\(https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991005490949705181&tab=AlmostEverything&search_scope=My_Inst_CI_not\)](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991005490949705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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(Third Edition), Addison-Wesley 2014 (used for COMP 5812M Foundations of Modelling & Rendering)

de Berg, Cheong, van Kreveld & Overmars, *Computational Geometry*

[\(\[https://leeds.primo.exlibrisgroup.com/discovery/search?\]\(https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991009944739705181&tab=AlmostEverything&search_scope=My_Inst_CI_not\)](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991009944739705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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Springer 2008

Students who wish to refresh the relevant mathematics prior to the module are recommended to consider:

Vince, *Mathematics for Computer Graphics*

([https://leeds.primo.exlibrisgroup.com/discovery/search?](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991007091809705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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(Fifth Edition), Springer 2017.

Students wishing a supplemental text for the differential geometry studied in the module are recommended to use one of:

do Carmo, *Differential Geometry of Curves and Surfaces*

([https://leeds.primo.exlibrisgroup.com/discovery/search?](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991011562349705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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Edition), Prentice Hall 1976

Kreyszig, *Differential Geometry* ([https://leeds.primo.exlibrisgroup.com/discovery/search?](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991019588047405181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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Dover 1991

A useful supplement for modelling surfaces is:

Farin, *Curves and Surfaces for CAGD: A Practical Guide*

([https://leeds.primo.exlibrisgroup.com/discovery/search?](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991009326569705181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

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(Fifth Edition), Morgan Kaufman 2002

Details for isosurfaces can be found in:

Wenger, *Isosurfaces* ([https://leeds.primo.exlibrisgroup.com/discovery/search?](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991019675339005181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

[query=any,contains,991019675339005181&tab=AlmostEverything&search_scope=My_Inst_CI_not](https://leeds.primo.exlibrisgroup.com/discovery/search?query=any,contains,991019675339005181&tab=AlmostEverything&search_scope=My_Inst_CI_not)

AK Peters, 2013

This list was last updated on 25/09/2020

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