

2024

| Modules | Code | PGDip level | MEng level | Pre reading start | Lecture block week | Post block end | Block week presentation mode | Lect | |
|---|-------|-------------|------------|-------------------|--------------------|----------------|------------------------------|--------------|-------|
| Compulsory Core Data Science modules presented by Industrial Engineering | | | | | | | | | |
| PGDip students take all 6 modules - MEng student take the last five modules | | | | | | | | | |
| Programming in R (Eng) (ProgR) | 14191 | 774 | n.a. | 15-Jan-24 | 29-Jan-24 | 2-Feb-24 | 15-Mar-24 | F2F & online | EV |
| Data Science (Eng) (DS) | 14190 | 774 | 874 | 4-Mar-24 | Fri 15-Mar-24 | 22-Mar-24 | 3-May-24 | F2F & online | MG |
| <i>Pre-requisite: Programming 1st year university level or equivalent (enquire with the Data Sciences lecturer)</i> | | | | | | | | | |
| Applied Machine Learning (AML) | 14022 | 774 | 874 | 8-Apr-24 | 22-Apr-24 | 26-Apr-24 | 7-Jun-24 | F2F & online | AE |
| <i>Co-requisite: Data Sciences 774/874</i> | | | | | | | | | |
| Optimisation (Eng) (OPT) | 14020 | 774 | 874 | 3-Jun-24 | 18-Jun-24 | 24-Jun-24 | 2-Aug-24 | F2F & online | JG/PV |
| <i>Co-requisite: Data Sciences 774/874; AML 774/874</i> | | | | | | | | | |
| Data Analytics (Eng) (DA) | 13856 | 774 | 874 | 22-Jul-24 | 5-Aug-24 | 12-Aug-24 | 20-Sep-24 | F2F & online | AE/EB |
| <i>Co-requisite: Data Sciences 774/874; AML 774/874; Optimisation 774/874</i> | | | | | | | | | |
| Big Data Technologies | 14189 | 774 | 874 | 26-Aug-24 | 9-Sep-24 | 13-Sep-24 | 25-Oct-24 | F2F & online | JdT |
| <i>Co-requisite: Data Sciences 774/874; AML 774/874; Optimisation 774/874</i> | | | | | | | | | |

| Specialization modules | | | | | | | | | |
|--|-----------------------|------|-----|------------------------------------|------------------------|------------------------|------------------------------------|--------------|---------------|
| MEng students choose one specialization module. | | | | | | | | | |
| Internet of Things (Emerging topics in Engineering 11758-875) (IoT) Presented by Industrial Engineering | new code 14771 | n.a. | 874 | 1-Jul-24 | 15-Jul-24 | 19-Jul-24 | 30-Aug-24 | F2F & online | TB (Thinus) |
| Deep Learning (Industrial Engineering)**** (DL) Presented by Industrial Engineering | 31496 | n.a. | 874 | 30-Sep-24 | 14-Oct-24 | 18-Oct-24 | 29-Nov-24 | F2F & online | EB (Load Jan) |
| <i>Co-requisite: Data Sciences 874; AML 874</i> | | | | | | | | | |
| Robotics I* Robotics II* Presented by Mechanical & Mechatronic Eng. <i>has pre-requisites</i> | 13014 | n.a. | 814 | See information on SUNLearn module | 22-Feb-24 18-Apr-24 | 23-Feb-24 19-Apr-24 | See information on SUNLearn module | F2F only | M&M |
| Advanced Dynamics I* Advanced Dynamics II* Presented by Mechanical & Mechatronic Eng. <i>has pre-requisites</i> | 62960 | n.a. | 814 | See information on SUNLearn module | 29 Feb-24 2-May-24 | 1-Mar-24 3-May-24 | See information on SUNLearn module | F2F only | M&M |

| Elective and Generic modules | | | | | | | | | |
|---|----------------|-----|-----|------------------------------------|------------------------|------------------------|------------------------------------|------------------------------|---------------------------------|
| Postgraduate Diploma students participate in the two generic modules : Project Management 713 and Industrial Management 744. | | | | | | | | | |
| MEng students choose two of the modules listed below. | | | | | | | | | |
| Advanced Topics in Engineering Management (ATEM) / Industrial Management (IM) Presented by Industrial Engineering | 11748 53937 | 744 | 873 | 5-Feb-24 | 19-Feb-24 | 23-Feb-24 | 5-Apr-24 | F2F & online | CP/SG |
| Numerical Methods I** Numerical Methods II** Presented by Div. of Applied Mathematics | 36323 | | 876 | See information on SUNLearn module | 27-Mar-24 29-Apr-24 | 28-Mar-24 30-Apr-24 | See information on SUNLearn module | F2F & online | Prof Hale nickhale@sun.ac.za |
| Project Management (PM) (Industrial Engineering) Presented by Industrial Engineering | 51993 | 713 | 873 | 20-May-24 | 3-Jun-24 | 7-Jun-24 | 19-Jul-24 | F2F & online | TB |
| Project Economics and Finance*** Presented by Dep. Civil Engineering | 58157 | | 812 | Pre-reading posted on SUNLearn | 20-May-24 | 24-May-24 | See information on SUNLearn module | Hybrid / Post Graduate venue | Mr C Jurgens cj@sun.ac.za |

| Additional Compulsory Module | | | | | | | | | |
|-------------------------------------|-------|-----|-----|--|------------------------------|---|--|------------------|-------|
| Professional Communication | 59447 | 771 | 871 | | Module opens end of February | Selfstudy module with deadline 5 April 2024 | | online selfpaced | MF/AB |

Note: 7xx modules are taught on PGDip level. 8xx modules are taught on MEng level.

* This module is offered by the Dep. of Mechanical&Mechatronic Engineering. Enquire details on pre-requisites/presentation mode/module structure/confirmation of presentation dates here: <https://www.mecheng.sun.ac.za/postgraduate-programmes/prospective-postgraduate/>
Regarding fulfillment of pre-requisites contact mfrei@sun.ac.za if you want to choose these modules.

** This module is offered by the Applied Maths Department. Enquire details on <https://appliedmaths.sun.ac.za/Postgrad/>

*** This module is offered by the Dept. of Civil Engineering. Enquire details on presentation mode/module structure here: <https://civeng.sun.ac.za/current-postgraduates/>

****Marks for this module will only be loaded at the beginning of the following year, i.e. they will not be available for a December graduation of the current year.

| Anchor modules and research assignment module | | | | | | | | | |
|---|-------|--|-----|--|--|--|--|--|--------------------|
| Research assignment (Industrial Engineering) 60 credits | 10881 | | 876 | | See submission date in SUNLearn module | See submission date in SUNLearn module | | | AE/ supervisors |
| Pre-requisite: 5 core modules passed. | | | | | | | | | |