



Australian
National
University

RSES COVID-19 Response Plan 2020



Research School of Earth Sciences

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Aims

The School's overarching aim is to maintain continuity of our education, research training and research activities through the course of the Covid-19 crisis. As the crisis evolves we will need to prioritize, optimize, and phase how we can best support these activities, particularly with anticipation of external constraints that may be imposed at any time.

Our specific aims are to:

1. Protect the health and wellbeing of our staff and students
2. Continue to function as a high performing research School and university
3. Continue all our core research and education activities wherever possible
4. Resume normal research activity as soon as possible after the crisis has passed
5. Minimise the impact on the research and candidature of our HDR, Honours and MESA students
6. Minimise the impact on the research and careers of our Early Career Academics
7. Manage the relationships and research with our external collaborators, clients and research funders.

We will need everyone's support to achieve these goals.

This document outlines the School's planned response under different scenarios that may manifest as the COVID-19 situation evolves through different stages. We anticipate changes to this plan. These changes will be updated and made accessible on the School's intranet.

Please note this plan is framed within the ANU's response and advice which in turn works to National and Territory response measures and guidance. ANU decision making is led by the Universities' Crisis Management team which is informed by ANU experts, who are tracking and assimilating the best science and best practices.

RSES Structure and People

RSES incorporates the Jaeger 1-8 and the B-west part of the Florey Building on the Acton campus, as well as off-site laboratory on Black Mountain and the Warramunga Array Infrasound Array near Tennant Creek, NT. For the purposes of this plan RSES is divided into the following operations

1. Administrative Services including WHS
2. Education.
3. Research
4. Warramunga Array

The School has approximately 120 academic and professional staff and 120 HDR students, in addition to ~100 FTE undergraduate, Honours and Master students and a large number

of emeritus, honorary and visiting staff and students. We have 15 staff in identified at-risk age groups along with many VAHAs. Other members of our staff and student community may be in high risk categories due to health vulnerabilities. We need to be especially mindful of the safety of these members of our community.

The School is divided into 7 research groups, generally with around 30 staff and HDR students. Differences in the nature of their research activities and the extent to which they rely on key supporting professional staff expertise necessitate detailed assessments of risk, preparedness and response down to the research group level. These group level plans will progressively populated and appended to this document.

RSES Research

In broad terms about a third of the School's research work is computational, the remainder being laboratory based of which about half is founded on field based activity. Overall at least half our research activity can be conducted remotely given reliable high quality internet access. Where working from home is not possible the impact on research could be severe, particularly for HDR and ECA projects at stages where substitute activities are not feasible.

A significant number of RSES laboratories rely on external income from visiting researchers. Cash flows (account balances) in some of the laboratories are at risk of incurring significant losses, potentially >\$1M, subject to the duration and depth of the crisis.

RSES Education

Planning for on-line delivery of courses and engagements for coursework students is being overseen by the College of Science critical management team in collaboration with RSES AD Education and the School's student administration team.

Significant challenges for the EMSC program come with a number of larger classes at 1st and 2nd year levels (50-160 students). Core laboratory and/or field based components of these classes present particular challenges in terms of implementing safe social distancing and moving to an on-line learning environment. It is difficult to substitute effective on-line learning for these core components, nor have they been delivered in flipped or blended modes such that there has limited lecturer expertise in on-line delivery developed.

Where laboratory classes cannot be moved fully on-line, we are putting in place practices to reduce risk of COVID-19 spread including required social distancing. The school is investing in extra demonstrators to help deliver essential laboratory practicals to meet and exceed social distancing measures (>1.5m between individuals at all times and >4m² per person).

COVID-19 phased response

The purpose of developing a phased response to COVID-19 is to ensure education and research continuity is maintained as far as practicable under various escalated scenarios. It is plausible that half our staff or more may be unavailable to maintain business continuity and engagement with other staff and students due to needs to self-isolate, if there are cases of staff testing positive, in combination with forced absence due to carer responsibilities.

For this reason, we have broken up our response plan into the following phases.

1. Preparation and Planning
2. Phased response - Social distancing, Working from Home, Enhanced Hygiene
3. Phased response – Significant staff absences (inability to work on-site or from home) due to ACT/NSW School closure and/or Illness
4. Phased response - University shutdown
5. Phased response – ACT or national lockdown

The School will maintain at least one administrative staff member on site every day on the J8 ground floor during every phase. All members of the RSES administration team will be accessible by phone, email and Zoom during business hours. We do not anticipate disruption to administrative services at this time.

Preparation and Planning

The School is emphasising to all staff and students the importance of reading communications from COO and VC, and of the ANU [COVID-19 Webpages](#) being the 'point of truth' when seeking information and advice. As the situation has escalated since 13th March, the School has commenced its own communications surrounding specific preparation and planning. This builds on prior extensive preparation and planning to implement on-line delivery of the EMSC education program and engagement with students.

The following steps have been implemented and emphasised to the School to reduce the risk of transmission of the virus on campus and to promote staff and student safety:

1. Staff and students feeling unwell must stay at home and follow the advice of [ACT health –novel coronavirus](#).
2. Staff and students have been encouraged to trial working from home arrangements, where feasible, and to do so with their supervisor's agreement.
3. Director, at the request of the Vice Chancellor, has asked staff, students and VAHAs considered most at risk from COVID-19 to work from home for their own safety (effective immediately). Definitions of most-at-risk (Commonwealth Department of Health) including individuals who;
 - are over 60 years old,
 - have diagnosed chronic medical conditions,
 - have diagnosed compromised immune systems

4. Social distancing is a requirement and must be practiced across campus to limit the risk of community transmission, with everyone asked to be constructive upstanders.
5. Staff have been requested not to meet in large groups and to trial use of video conferencing (e.g. Zoom) to conduct all meetings from 23rd March.
6. All international travel on ANU business is denied, and any staff and students currently overseas have been identified and are being recalled or assisted.
7. All domestic travel for ANU business is strongly discouraged – any requests must be approved at Director (D3) level until further notice.

The following steps are underway:

1. Establishing whether any staff or HDR student do not have internet access at home. The School will provide support if necessary (e.g. via dongle)
2. Laptop and other portable School IT devices are being allowed to be taken off-campus to support working at home arrangements.
3. Staff may request an ANU VPN access through Duncan Bolt (ITS) who is adding names to a list which is being submitted in batches to avoid individual requests overloading ITS capacity.
4. All non-essential face-to-face School Meetings, Seminars and Events (including morning tea service) have been cancelled from 19th March until further notice.
5. School Meetings and seminars have been trialling the use of Zoom while permitting in-person attendance subject to social distancing requirements - with the aim to move to video-conference-only (Zoom preferred) meetings from 20th March.
6. Multiple actions implemented to deliver the EMSC education program on-line and to maintain the student experience at the highest possible level. These efforts are ongoing and are likely to continue through into 2nd semester.
7. Academic teaching staff are being upskilled and supported to deliver as much of the EMSC program on-line (using Zoom or other channels) with assistance and as a priority of the Education Office and meriSTEM project officer.
8. All supervisors of staff and students have been asked to engage to plan work priorities and working arrangements under various scenarios to support the development of a phased response to COVID-19.

Monitoring and Communication

The Executive will meet on Tuesdays and Fridays to assess the situation and develop necessary actions as required. Regular communications will be made to the School to raise awareness and implement the ANU and the School's COVID-19 phased response plan.

The primary source of information is the [ANU COVID-19 advice page](#). This RSES Response plan will be updated on the [RSES website](#).

Phased response - Social distancing and enhanced hygiene

In the phase the School aims to maintain business, including all research and education activity, at as near to normal levels as possible, while minimizing the risks of transmission of the coronavirus within the School.

The School will implement effective social distancing, including encouraging working from home where feasible to minimize the number of people in the workplace, ensuring mandated distances (>1.5m) and spaces (4m²/person) are maintained at all times, and all face-to-face meetings are replaced by video-conferencing wherever possible. Do not engage in handshakes, hugs or other touching. All chairs of face-to-face meetings (including one on ones) are required to log persons attending, commencing 23rd March, and encouraged to back-date to 16th March where possible. Face-to-face meetings should not exceed 15 minutes or less in small spaces, and kept under two hours in larger spaces.

Any staff wishing to self-isolate during this phase and who is unable to work from home or to continue work on-site could consider taking annual leave and long service leave. Similarly, staff who choose to remove their child from Childcare or School, where the Childcare/School remains open, are encouraged to work from home where possible, or consider taking annual leave and long service if needing to caring for young children, or a mix of working from home and annual leave and long service depending on what is achievable (as negotiated with their supervisor).

Any staff, student or VAHA with diagnosed medical conditions or diagnosed compromised immune systems are strongly encouraged to work from home. To avoid the risk of overuse injuries when working from home, staff should set up their home office or workstation following the Pulse Module and be comfortable with working from home. Staff should complete a home based work checklist with a photo of their home office or workstation. Where staff are considering a long period of home-based work (say 3 months), staff should complete the home-based work form seeking WEG approval, including providing a photo of the home office/workstation.

The School will also be focused on promoting enhanced hygiene during this phase to reduce the risk of transmission within the School with the ANU and broader community. Measures include: advising and requiring staff and students **not** to come to the workplace/classes if sick; washing hands regularly with soap or sanitizer including when entering or leaving the workplace; practicing cough or sneeze etiquette; minimizing the touching of surfaces or objects by multiple people including using automatic doors or leaving other doors ajar where appropriate; and disinfecting surfaces and handled objects in shared spaces regularly.

Phased response - Significant staff absences (inability to work) due to ACT/NSW School closure and/or Illness

In the phase the School aims to maintain all high priority research and education activities, while continuing to minimize the risks of transmission of the coronavirus within the School as per the *Phased response – Social distancing and enhanced hygiene*. The clear risk during this phase is the absence of critical staff needed to maintain business continuity in all high priority research and education activities, and administrative services.

Further detailed planning is required at Research Group level to identify all critical staff and if they were to become unavailable, to provide contingency for maintaining facilities, activities and services by alternate personnel where possible. If not, facilities and activities may need to be closed down temporarily. At School level the required number of fire wardens and first-aid trained will be maintained on-site, else activities in some areas and buildings may need to be suspended. Contingency is also required to have alternate staff assume key delegations during this stage, should key staff become unavailable due to illness or other reasons.

The implementation of on-line learning for all courses across the EMSC program will enable their delivery by identified suitable alternate lecturing and demonstrating staff. A matrix of staff and demonstrators to provide this contingency is under development and will be provided in the next version of this plan.

If childcare centres or schools start to close and staff are unable to find alternative caring arrangements, staff are eligible to apply for carers leave under the EA, supported by statutory declaration or possibly notice from the childcare centre/school stating the period of the closure.

Phased response – University closure

This phase will focus on maintaining only defined essential research facilities and essential personnel on campus. Further planning is being undertaken to define these facilities, associated activities, and to identify specific persons. Decisions on what facilities and activities to prioritize and which to deprioritize, alongside decision trees in regard to the availability of alternates to essential persons are also required.

Phased response – ACT/national lockdown

This phase will focus on maintaining essential research facilities and essential personnel on campus, and having alternates to substitute to maintain the roles of essential personnel.

Please note the last two phases of response are subject to further planning at the current time.

Details of EMSC Education COVID-19 response plan

All face to face lectures are being phased out and will move to online delivery from Monday 30th March. We supporting all our course convenors to adopt appropriate remote/online teaching resources (e.g. Zoom meetings) and techniques for tutorials and other classes. The School is supporting the rapid rollout of on-line delivery with the assistance of the School's new MeriStem project officer, training by the School's existing education IT Officer, and bringing in external support to rapidly upskill teaching staff in speaking to camera. Academics are being encouraged to engage with ANU's iLEAP initiative, by visiting the Interactive learning section or get in touch with the team to learn how iLEAP can help make your course more interactive and engaging. <https://services.anu.edu.au/education-support/interactive-learning/ileap>

Alternative assessments to exams are being explored and adopted including:

- Online wattle quizzes
- Short reports
- Video presentations

All coursework teaching in the EMSC program is being paused for one week from Monday 23 March, allowing staff and demonstrators to focus on:

1. Finalising moving our courses to on-line learning to complete semester one and begin to prepare to continue teaching in this mode for the rest of the year;
2. Bringing home staff and students who are currently overseas;
3. Setting up work from home arrangements where appropriate, and
4. Finalising local level business continuity plans.

Our students are being encouraged to continue studying during the teaching pause. The University remains open, including libraries, childcare centres, retail outlets and residential halls.

Classes will resume on Monday 30 March, with the two week mid-semester break occurring as planned. Semester one will be extended by one week following the break, and the timing of the end of semester and exam period will be adjusted to accommodate this, as below:

- One week pause: Monday 23 to Friday 27 March
- Classes resume: Monday 30 March (new Week 5)
- Mid-semester break: Monday 6 April to Friday 17 April
- Return from mid-semester break: Monday 20 April (new Week 6)
- End of teaching: Friday 5 June (new Week 12)
- Semester one exam period: Thursday 11-Saturday 27 June

During the pause all staff, including casuals, will continue to be paid their usual fortnightly pay, and the pause will not affect any planned leave or self-isolation arrangements.

Honours and Masters

Rhodri Davies will continue to convene the program remotely, with support from David Heslop and Tiah Penny.

Coursework:

- a. All courses will be moved to online delivery from Monday 30th March as follows:
 - (i) *Research Methods* (Andrew Roberts) - ready to go online;
 - (ii) *Analytical techniques* (Greg Yaxley) - 50% (lab component) already delivered with remaining 50% to be delivered online following the mid-semester break, as timetabled;
 - (iii) *Computational Geosciences* (Andrew Valentine) – to be delivered online after the mid-semester break, as timetabled;
 - (iv) *Data Sciences* (Malcolm Sambridge) - to be delivered online, in Semester 2, as timetabled;
 - (v) *Research Proposal & Presentation* (Rhodri Davies) - to be delivered and assessed online;
 - (vi) *Research Orientation* - no enrolments for 2020.
- b. All lecturers/convenors have set up a Slack Chat (<https://slack.com/intl/en-au/>) so students can interact with each other and with convenors/lecturers. All students see each other's questions and answers, and it encourages the development of a cohort. All academics to make themselves available on Zoom at a specific time, for 30 mins to 1 hour a week, so students can drop into a zoom/slack room and seek advice, clarification, ask questions, and generally touch base as required.
- c. Elective courses (only a few selected by H&M students) will transition to online delivery from Monday 30th March.

Research Projects

Students and supervisors are being expected to meet ASAP (via Zoom or in person) to plan completion of their projects under a range of scenarios. Secondary (support) supervisors, which every student has nominated, are expected to take part in these discussions and to provide backup should their primary supervisor be unavailable (e.g. carer responsibilities, sick). We envisage the following potential scenarios, but stress the responsibility of supervisors to initiate and lead contingency planning with students, not vice versa:

- a. A given project can be completed, as expected, with minimal disruption, e.g. with most computational based projects. Plan in place to try to ensure that laboratory-based projects can go ahead with minimal disruption.
- b. Laboratory access and/or field may become limited or not possible, in which supervisors and students need to consider contingencies and to formulate a workable alternative "plan B". In such cases can student projects be adapted to work with an

- existing dataset for example? Solutions are likely to be depend upon individual circumstances and can be discussed with the AD H & M if required.
- c. Students and supervisors should discuss how projects will proceed if their primary supervisor is unavailable, and how the secondary supervisor will assume supervision of the project?
 - d. Where assessment and extensions are delayed extend beyond expected graduation dates, CoS and University guidelines will be followed when they become available.
 - e. Convenors will set up a Slack Chat for the Honours and Masters program, allowing straightforward interaction with students. Convenors will also hold Zoom sessions, as required, to verify that everybody is tracking as they should.
 - f. Final seminars will be undertaken using Zoom and advertised widely to the school.

Planning for Higher Degree Research continuity

The ANU and School aim to minimise the impact of COVID-19 on the research and candidature of our HDR students. Accordingly, all HDR students and their supervisors are well-prepared to work from home where possible and if the need to do so arises. If we can minimise the number of people on site we are better able to reduce risk to staff and students to keep laboratories and experiments running. If the ANU is forced to close, most if not all laboratory work may need to cease.

Here are some things HDR students need to discuss with their supervisors and panels:

- What experiments would be affected by closure of the ANU campus?
- What sort of activities can be undertaken if you need to work from home?
- How would you go about pausing, reprioritizing, or reframing parts your research?
- What experiments require attention if the campus closed? Make a list as you may be asked for one.

Here is list of a few simple things to set up now, while normal operations continue:

- Make sure you and your supervisor have each other's contact details and agree on how you will communicate regularly, e.g. email, phone, weekly zoom meetings.
- Make sure you have a computer you can use at home. Discuss what options are available with your supervisor.
- Install [Zoom](#), Skype or similar (check which software you both agree on)
- Make sure you have the ANU VPN client set up, and know how to use it (instructions here). There is also a reverse proxy login, these will give you remote access to things like journal articles and your files on the network.
- Make sure you have access to the data you need (e.g. on an external hard drive)
- Make sure you have access to a back-up drive to keep your work safe while working from home

- Once you think you're all set up to work from home, work from home one day (or two) to trouble-shoot your setup.

All future milestones should be Zoom based if possible, this includes midterm presentations. Please keep track of any disruptions to research, we will be asking for this information from time to time. This could be a good time to get that paper finalized, write your literature review, there is a lot that can be accomplished. Please remember to follow the social distancing and health advice provided by the ANU and check the website if you have any questions.

Research Group phased response plans -

The purpose of Research Group Plans is to provide specifics and details relevant to maintaining business continuity of individual research groups under each phase of implementation, including identification of key risks and contingencies to keep research facilities and other academic activities optimized. Special responsibility is given to each Research Group at RSES to ensure regular contact is maintained between all group members via zoom, slack or other online platforms, and for supervisors to develop agreed contingency plans with their staff and students.

The following is a draft of the Geodynamics and Tectonics group's plan. This and other research Group plans will be added in the next version of the Schools Covid-19 response plan.

Earth Dynamics COVID-19 Phased Response plan

Geodesy and Geodynamics; Most research is computation-based processing and analysis, such that staff and students are able to work from home. All personnel have been contacted and have confirmed that remote access is possible via internet and the VPN. Each staff member/student has been encouraged to work from home, effective 18 March 2020. A group meeting will be held each Thursday via zoom and arrangements have been made for supervisors to remain in contact with both staff and graduate students. Teaching of EMSC3032 and EMSC3033 will be delivered online by no later than 30th March 2020.

Argon-Argon: The Ar/Ar related laboratories are accessible to authorized persons only, (Davood Vasegh and Marnie Forster). Enhanced hygiene is already implemented through WHS procedures where PPE is mandatory (googles, masks, gloves) along with enhanced lab hygiene (sanitizers). Microscopes in the microscope room entry are also only accesible for authorized persons, and are set up ~2 metres apart. Cleanliness is essential as this is a clean room for mineral packing for Ar/Ar, with use of gloves is mandatory and masks available if required.

The argon lab runs relatively automatically. Academic and professional staff are in regular at-distance contact in normal situations and this will continue. Davood Vasegh is needed

on-site from time to time to keep experiments operating, with Marnie Forster able to substitute if required. HDR students will need to use the microscope room from time-to-time to progress Ar/Ar analyses. Group meetings will occur regularly using zoom.

Phased response - staff absence

Geodesy and Geodynamics: three significant activities at risk from possible staff absences:

- Teaching EMSC3032. Paul Tregoning delivers the lectures, tutorials and computer labs for this course, with two demonstrators for the labs. Simon, Sebastien, Julia, Herb could fill in if necessary. The course is mature and material is prepared already. 2019 Echo 360 recordings could be made available if absolutely necessary.
- Teaching EMSC3033: Sebastien Allgeyer and Simon McClusky are teaching 50% each based on material prepared in 2019. Both are able to cover the workload of the other. David Heslop and/or S&MG academic could provide further back-up in a worst-case scenario.
- Subject to functioning NCI and School computing resources, group members can work effectively from home. School computing failures currently rely on the intervention of Herb McQueen to reset and resume operations. If ill, help would be sought from other capable staff in the school (Julian Byrne S&MG, Duncan Bolt or potential other ANU IT)

Phased response – University closure

Geodesy and Geodynamics: The ongoing operation of high-performance computing resources, specifically the Terrawulf and the NCI are essential for research continuity. Providing these services continue to function, all staff/students can work effectively from home. Any failure of terrawulf/NCI would require intervention; otherwise research activities and output will drop significantly.

Davood Vasegh work in the Ar/Ar lab is essential to keeping the laboratory running, in certain cases, Marnie will be required to do tasks in the laboratory or stand in for Davood if he is not capable. Marnie Forster will also have essential work in the Argon Prep lab at different times, so as to prepare samples and keep the labs progressing. Naina, PhD candidate, also will have essential work in the Argon Prep lab and microscope room to keep her research progressing.