

## Section 1 General preparedness

The scope of the outdoor activities of university students is not limited to the city and extends to all areas and environments, including forests, coasts, rivers, lakes, marshes, and mountainous areas. In addition, by school of engineering nature, it may require to perform activities in mechanically and biologically hazardous areas. Therefore, these activities require utmost care and attention as the smallest carelessness can lead to major accidents.

While conducting outdoor activities (e.g., field experiments and practical training), necessary information should be collected in advance, and accordingly, plans should be made in advance. It is important to have **more than one person** in a group in the case of accidents (e.g., slips and falls or encounters with wild animals). In addition, an instructor in charge of the field trip should accompany the group. If they are unable to accompany the group, plans and communications with them should be done in advance to obtain their approval before the trip.

Pay close attention to the site, do not stick to the plan execution, and act in a **safety-first** manner.

In the event of an accident or other unforeseen incident, remain calm, take appropriate measures, and contact relevant authorities immediately.

## Section 2 Preparation before going out

### 1 Planning and information gathering

If there are cases of past activities, be sure to confirm the details of the activities and near-misses that occurred during the activity. When planning, allow plenty of time to travel and perform activities. Not only understanding geography, weather, and so on with map or weather forecast, <sup>\*1)</sup> but also even if the weather is favorable, gather information on landslides, rising rivers, waves and tide level, the ecology of local wildlife, and how to posture safety if you encounter wildlife. <sup>\*2)</sup>

The decision to implement the plan should be comprehensively made, considering the opinion of faculty members in charge. If the situation is predicted to be unfavorable, the project should be canceled. In a hazardous area where entry is restricted, you should contact the person in charge of the area and ask for permission in advance for performing investigations and/or operations.

Participants should be briefed on the itinerary, preparations, and other types of trip-related information of the selected trip date.

<sup>\*1)</sup> It would be advisable to know how to read **topographical and weather maps**.

<sup>\*2)</sup> Before the winter season of a bad harvest year of hard fruits, the probability of encountering bears in the morning and evening even outside the mountain forest is high.

## 2 Securing emergency communication channels and first aid training

Make sure to confirm in advance on how to contact in case of an emergency, and be sure to inform faculty members in charge, universities, and, if necessary, relevant authorities about the way to contact (e.g., cell phone number). Refer to the next section “Clothing and equipment” to gather information on the necessary equipment and clothing. Please read “Chapter 2 First-Aid Measures” carefully, and practice it beforehand if necessary, so that you can immediately deal with an injury or accident occurring onsite. Moreover, it would be advisable to know clinics or hospitals near the site.

## 3 Preparing clothing and equipment

### (1) Clothing

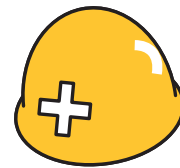
Onsite, wear clothes and footwear with long sleeves and long pants, gloves, and boots, which are safe and possess few exposed skin areas. In addition, safety shoes, cold protection and waterproof clothing, and breathable rainwear to prevent heatstroke during summer season should be worn if required.



**Work area-Safety First**

### (2) Equipment

a Onsite, wear clothing and footwear with long sleeves and long pants, gloves, boots, etc., that are workable and safe, and have few exposed skin areas. In addition, safety shoes, cold-weather and waterproof clothing, and breathable rainwear to prevent heat stroke in summer should be worn if necessary.



b In places where there is a risk of falling rocks, landslides, falls, avalanches, and falling water, prepare helmets and life jackets.

c To can be instantly treated for external injuries and sudden illnesses during outdoor activities, in addition to disinfectants for external injuries depending on the site, prepare cold medicines, digestive medicines, antibiotic ointment, antibiotics for taking, insect repellents, <sup>\*3)</sup> antidotes for poisonous snakes, poultices, and small medical equipment, motion sickness medicine, and so on. Medicines vary depending on the target area, and it is the responsibility of each person to select appropriate medicines. Moreover, if necessary, prepare equipment<sup>\*4)</sup> for use while encountering wild animals.



<sup>\*3)</sup> Insect repellents containing dates, which repel ticks, are available.

<sup>\*4)</sup> There is a bear spray known as “Counter-Assault.”

d If traveling to an area where safe drinking water is not available, carry sufficient quantities of portable food and drinking water.

e Keep cell phones as a means of communication. Cell phones may be used for a long period; therefore, carry external battery packs. While traveling to areas where cell phones cannot be used, it is advisable to prepare a means of communication (e.g., cell phones that can make satellite calls, specified low-power transceivers<sup>\*5)</sup> (no license required), and amateur radio<sup>\*5)</sup> (license required)).

\*5) Telephony distance—Specified low-power transceivers: several hundred meters; amateur radio: several kilometers.

f Keep backup lights (e.g., headlamps and others) as the sun may set earlier than expected during the activity.

g Keep necessary equipment for activities with regard to each specialty.

#### 4 Advance notification

Faculty members in charge should notify the university in advance and make prior contact with relevant authorities. Students should consult with the faculty members about the required documents and notifications and ask them to submit the documents when necessary. The following documents are required to be submitted:

(1) Field experiment/practicum implementation plan (should be submitted)

(2) Travel order inquiry (travel application form)

(3) Permits to enter restricted areas\*<sup>6</sup> (apply and obtain from relevant authorities)

\*6) Refer to “Field precautions (7) investigation and work in hazardous areas.”

(4) Other notifications required for activities in the respective fields of expertise.

#### 5 Confirmation of accident insurance

While a disaster or accident occurs, medical treatment and rescue incur a high cost. While conducting outdoor activities, it is desirable to have appropriate insurance coverage supposing the occurrence of various disasters and accidents.

At Nagaoka University of Technology, students are required to join the “Personal Accident Insurance for Students Pursuing Education and Research” upon enrollment. This insurance is applicable to “injury” during “educational and research activities.” It includes onsite and accidental injuries during transportation (moreover, there is a special clause for coverage during commuting to and from the University). However, this insurance does not cover illness or disasters (earthquakes, volcanic eruptions, tsunamis, and others). If necessary, other insurance schemes should be purchased as well.

##### - Excerpt from the Student Life Guidebook (page 25) -

Personal Accident Insurance for Students Pursuing Education and Research (**PAS usually called Gakkensai**) is an indemnification program designed to **grant necessary benefits to indemnify for an injury, etc., caused by a sudden or random accident of an external origin** in the course of educational and research activities (including commuting to school and extracurricular activities), thereby contributing to enhancement and development of education and research activities of universities. **All the students of this university are required to enroll in this insurance at the time of admission.**

■ An "injury" shall include the following items but **shall not include diseases**

① Toxic symptoms arising suddenly from the accidental inhalation, absorption or consumption of toxic gases or substances in one breath (excluding toxic symptoms arising from continuous inhalation, absorption or consumption).

② A physical impediment arising from sunstroke or heatstroke.

**■Other cases not covered by the insurance**

Willful acts, acts of conflict, suicide, crime, earthquakes, eruptions, or resulting tsunamis, war, riots, radiation or radioactive contamination, accidents caused while driving unsafely due to being unlicensed or under the influence of alcohol, **accidents in the student houses**, accidents due to such an act, or in such a place or at such a time as is prohibited by the university, **accidents during dangerous outdoor extracurricular activities** including mountain climbing and skydiving, etc. **Accidents that do not fulfill the conditions of being sudden, unexpected, and of an external origin, such as acute alcoholic intoxication caused by drinking alcohol** are not covered.

Scope of compensation	Death benefits	Physical disability benefits	Medical benefits	Additional hospitalization benefits
During regular curriculum /school events	20 million yen	1.2 million to 30 million yen	3,000 to 300,000 yen	4,000 yen per day
During periods when the insured is on school premises other than the above stated. While participating in extracurricular (club) activities outside of school facilities which are reported to the university	10 million yen	600,000 to 15 million yen	In the case of treatment for 4 days or more 6,000 to 300,000 yen	
During the commute to school or transit between school facilities			In the case of treatment for 14 days or more 30,000 yen to 300,000 yen	

- \* **If you have an accident, report to Division of Student Affairs immediately**, for the accident may not be covered by the insurance even if it falls under categories above or the insurance money may not be paid if your accident report is delayed.
- \* Said number of days for treatment means the actual number of treatment days from the date of the start of treatment up to the date the injury is cured to the extent that the insured can return to normal life (the actual number of days of hospitalization or commuting to hospital). Please note that not all the days during the treatment period are covered.

## Section 3 Local preparedness

### 1 Local precautions

When in the field, do not stick to the planned itinerary, but act in a **safety-first** manner, paying attention to the following points:

- (1) Act in groups of several people and avoid acting alone as much as possible.
- (2) Carry identification, insurance cards, and entry permits.
  - a Carry a student ID card, driver’s license, or other identity proof.
  - b Carry a copy of your insurance card to cover possible injury or illness during the survey.
  - c If a permit for passage or entry is required,\*7), carry that as well.

\*7) Refer to “Field Precautions (7) Investigation and Work in Hazardous Areas.”

(3) Health management

- a Outdoor activities are physically exhausting and should be discontinued if you are not feeling well. If you notice any physical discomfort during the survey, stop work immediately and seek medical advice if necessary.
- b When the body becomes wet due to low temperatures or rainfall, the body becomes cold and unwell and movements become slower. This can be a factor in accidents; thus, keep your hands, feet, and neck warm.

(4) Traffic safety

- a While traveling to and from the site by a car, follow traffic laws and regulations, and pay attention to speed limits and distance between vehicles.
- b Be careful while traveling by a car to conduct surveys and while working in town.
- c When working outside a vehicle, wear a helmet and high-visibility clothing, and be aware of passing vehicles.



**Drive Safely...**

(5) Standing signs

If there are warning signs of “Landslide Danger Zone,” “Dam Release Caution,” and “Beware of Bears” near to you, be sure to read them carefully.



**Check signs**

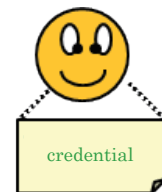
(6) Weather

When the weather worsens or after sunset, the work should be stopped without exertion, and the crew should withdraw from the site. Even if the weather is favorable, there are cases where disasters are likely to occur (e.g., landslides and other ground disasters caused by bad weather, torrential rains in the upper reaches of rivers, rising rivers owing to dam releases,\*8) and high waves caused by typhoons). Moreover, as there are times when wild animals are more active, always pay attention to the surrounding conditions and never take unreasonable actions.



**Act safely!**

\*8) For example, the **Shinano River**, which runs through Nagaoka City, is 367 km long. Here, floodwaters upstream can take up to **2 days** to reach Nagaoka; thus, the **water may rise even when the weather in Nagaoka is clear.**



(7) Surveys and work in hazardous areas, nature conservation areas, and wild flora and fauna

- a Avoid surveying in areas where entry is prohibited (e.g., landslide areas and collapsed areas, hazardous areas, and construction sites).

**Carry around your credentials**

- b If it is necessary to survey or work in a prohibited area or danger zone, contact the person in charge of the area and obtain official permission in advance; follow their instructions on the day of the survey or work. If a permit is available, be sure to carry it with you.
- c In hazardous areas where there is a risk of falling rocks and landslides or where there is a possibility of encountering natural creatures, take precautions to avoid accidents by wearing protective gears, e.g., helmets and work clothes, and life jackets when you are near water areas, which include beaches, rivers, lakes, and marshes. Avoid acting alone and be aware of your surroundings. Be especially careful immediately after bad weather, as it can be dangerous.
- d Note that few survey sites and activities may require prior permission.\*9) In addition, while working underwater, underground, or under special circumstances, for instance, in areas surrounded by animals,\*10) be sure to work together with an experienced person.

\*9) Refer to “(9) Preservation of natural environment (a) to (c).”

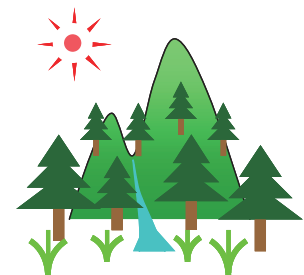
\*10) Be aware that qualifications similar to that of a diver may be required depending on the situation.

#### (8) Observance of sociality

- a Surveys and work on private property should be conducted after obtaining the consent of the landowner. Moreover, be mindful not to invade the privacy or public nature of others. In urban areas and crowded places, do not disturb others.
- b Do not behave in a manner that may lead to the destruction of nature or damage to property.
- c Be aware that collecting plants and animals that are cultivated, farmed, or bred is equivalent to theft.

#### (9) Preservation of the natural environment

- a Do not unnecessarily destroy the natural environment. In particular, do not collect rocks, animals, and plants in areas where there are legal restrictions such as national parks, national monuments, prohibited areas for collection, or bird and animal sanctuaries. If it is necessary to do so in the course of your research, consult with your instructor and be sure to contact the relevant authorities to obtain official permission.



**Preserve nature**

- b If you wish to **capture birds or animals for research**, you need to submit an **application for permission** to the relevant municipality or prefecture and obtain permission in advance. Note that in areas designated as natural monuments, it is necessary to obtain **permission to change the current status**.\*11) Some areas of oceans, rivers, lakes, and marshes have fishing rights; therefore, please obtain a license or permit as necessary. If you have a license or permit, carry it with you.

\*11) It may take up to 2 months after application for approval; therefore, please apply as soon as possible.

- c Even in areas where there are no legal restrictions, avoid overfishing and moderately collect required items.

(10) Others

Accidents may occur in fields that are difficult to predict, and each person should act based on common sense according to the situation. In addition, be sure to learn what situations (dangers) may occur on a daily basis.

## 2 What to do in case of unforeseen circumstances

If an emergency or unforeseen situation arises, calmly assess the situation without panicking, and take appropriate measures according to the situation. Moreover, contact the university and other relevant institutions.

In the event of an emergency situation that results in injury, illness, or a person in distress, contact the relevant authorities in accordance with the details described in “(6) First-aid measures in emergency situations during outdoor activities” and “Chapter 2: First-Aid Measures.” If necessary, take first-aid measures for the person involved. It is advisable to read the first-aid procedures beforehand.

(1) Injuries and illnesses

Take measures in accordance with the details described in “(6) First-aid measures in emergency situations during outdoor activities” and “Chapter 2: First-Aid Measures.” If necessary, go to a nearby hospital. If the person is unconscious, unable to walk, or cannot be transported, call for the rescue team.

(2) Distress

- **In the case of an incident involving yourself:** Act with caution while attempting to contact the outside world by means of communication. In inclement weather and at night, temperatures drop even in the summer season, and body temperature and physical strength are depleted. Be sure to conserve physical strength and reserve food and other supplies while giving due consideration to clothing.
- **In the case of an incident involving companions:** Request rescue according to “(6) First-aid measures in emergency situations during outdoor activities.” You may search by yourself until help arrives, but be sure to do so to the extent that you can ensure your safety. If you find a person in distress, assess his/her condition according to “(6) First-aid measures in emergency situations during outdoor activities,” and take first-aid measures if necessary. When the police or other authorities arrive, explain the situation and take over the search and take first-aid measures.

(3) Falling water and drifting

- **In the case of an incident involving yourself:** Do not unnecessarily go against the current<sup>\*12)</sup> and get ashore as soon as possible. Wearing wet clothes will significantly deplete your strength; therefore, change or dry yourself immediately. If you are unable to reach shore on your own, try to conserve your strength and wait for the rescue team.
- **In the case of an incident involving companions:** Do not approach unnecessarily<sup>\*13)</sup> and attempt to secure the accident victim by throwing ropes or objects. If it is impossible to secure the person, call for help according to “(6) First-aid measures in emergency situations during outdoor activities.”

While waiting for help to arrive, you may try to secure the victim yourself, but be sure to do so within the limits of your safety. Once the accident victim is secured, assess his/her condition according to “(6) First-aid measures in emergency situations during outdoor activities,” and take first-aid measures if necessary. When the police or other authorities arrive, explain the situation and take over the search and take first-aid measures.

\*12) If the current is strong, it is advisable to concentrate on staying afloat while waiting for the rescue team and conserving your strength.

\*13) Even if you are in a safe place, there is a high possibility that you will be grabbed onto by your companion, causing you both to fall into the water together.

#### (4) Ground collapse, house collapse, and avalanche

▪ **In the case of an incident involving yourself:** Exit the building or go outdoors as soon as possible. If you cannot escape, remain calm and wait for the rescue team while trying to ensure your safety and conserve your strength as much as possible. If you are injured, take first-aid measures in accordance with “Chapter 2 First-Aid Measures.”

▪ **In the case of an incident involving companions:** Do not approach them unnecessarily, but call for help in accordance with “(6) First-aid measures in emergency situations during outdoor activities.” You may attempt to secure the injured person by yourself until help arrives, but be sure to do so within the limits of your safety. Once the accident victim is secured, assess his/her condition according to “(6) First-aid measures in emergency situations during outdoor activities,” and take first-aid measures if necessary. When the police or other authorities arrive, explain the situation and take over the search and take first-aid measures.

#### (5) Encounters with wild animals

While doing activities in nature, one may encounter various wild animals (e.g., bears, wild boars, monkeys, deer, and snakes). If you encounter these, do not panic and deal with the animal as you have studied them beforehand\*14).

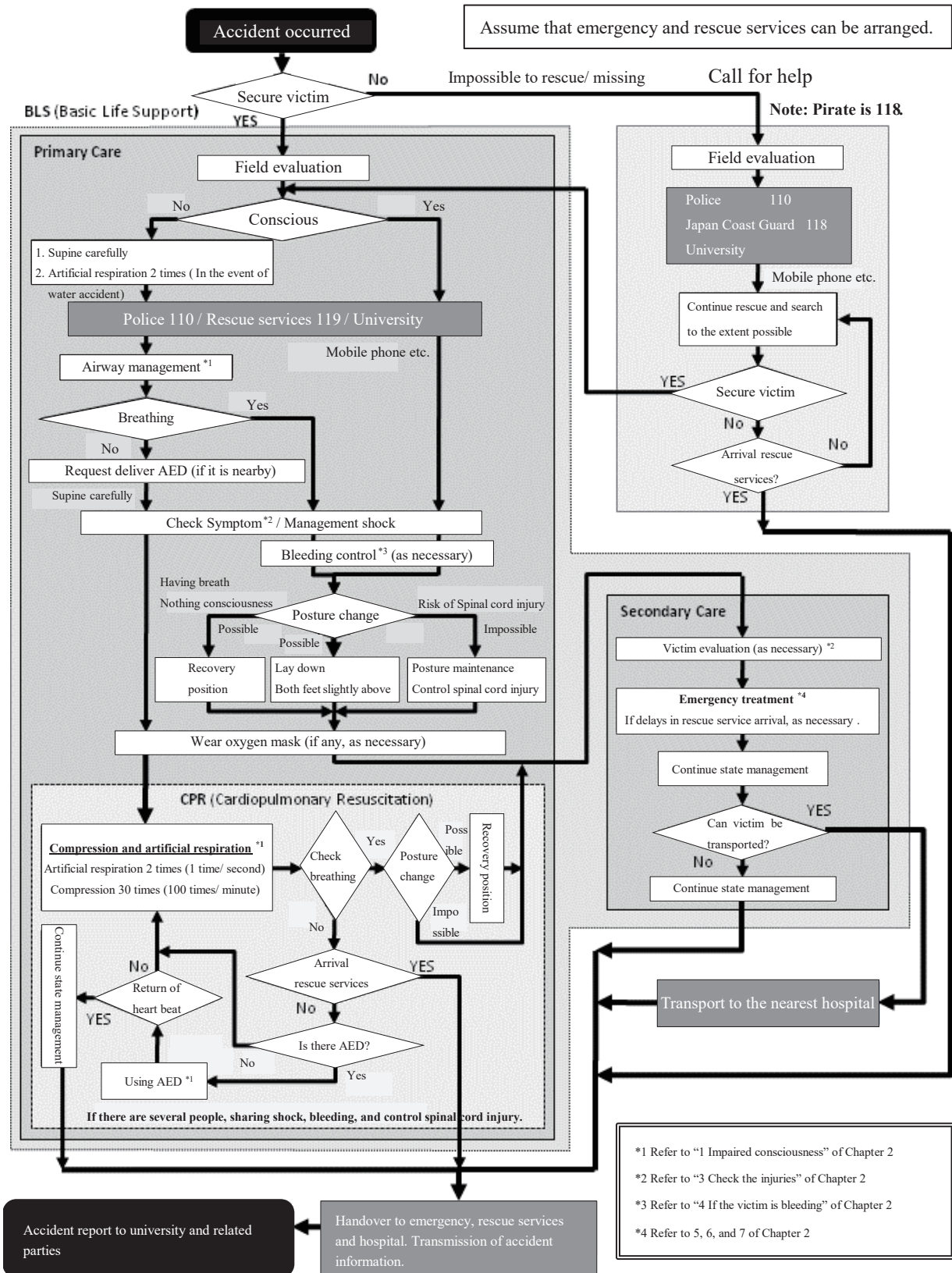
\*14) For example, if you encounter a bear, if it is > 15 m away, you should back away slowly, keeping your eyes on the bear. If the bear **attacks** you, assume a safe posture. Never run away. In the case of a wild boar, it is best to climb to a tree or pole by at least 1 m in height.

#### (6) First aid for emergencies during outdoor activities

In the event of an accident, the steps shown in the flow chart below should be taken. Read it carefully in advance to understand the action flow.

Emergency contacts are the police (110) and emergency services (119), as well as the Japan Coast Guard (118) in the waters.





## Section 4 Post-completion preparedness

Upon returning from the field, report to concerned parties that the activity has been completed. A record of the activity will be kept for future reference.

(1) Ensure physical health

During outdoor activities, people may get injured without realizing it, or they may be carrying insects or seeds. In case of injury, appropriate measures should be taken immediately. If a tick is attached to you and you are bitten, immediately go to a hospital to report the tick bite and have it treated.

(2) Report the end of your trip

Upon returning from the outdoor activity, report to the instructor or the person in charge that the activity has been completed, including a summary of the activity and necessary information.

(3) Document the details of activities conducted

**It is advisable to document the day's record, notes, and reflections, and add them to the preliminary materials.** As the activities and notes will be useful for subsequent activities, any particular points for improvement should be discussed afterward to contribute to future activities.

(4) Early preparation

Meetings should be held when new students are assigned to new laboratories and before the start of surveys to review past activities and near-miss cases and share findings with all the members.