

**MARINE INSTITUTE'S SUMMER BURSARY SCHOLARSHIP SCHEME 2018** is a scholarship programme aimed at undergraduates of Universities, Institutes of Technology and National Institutes for Higher Education. The Bursary scholarship programme is strictly limited to undergraduates who will have completed at least 2 years study in a relevant discipline by the start of the programme. Students who have completed two Marine Institute bursaries are not eligible to apply.

Successful candidates will work with full time Marine Institute staff in exciting areas such as Marine Fisheries, Salmon Management, Aquaculture, Fish Health Unit, Oceanography Instrumentation, Benthic Ecology, Communications and the Office of Research & Development. The bursaries are based at our facilities in Oranmore – Galway, Newport Co. Mayo, or at a field station or port as stated in the attached list.

A bursary scholarship is valued at €275 per week and will last between 8-12 weeks depending on the bursary on offer and suitable funding.

Details of the bursaries on offer for 2018 and an application form are available from one of the following:

<http://www.marine.ie>  
College Careers Office

**TO APPLY FOR BURSARY PROGRAMME 2018 HERE'S WHAT YOU NEED TO DO:**

- 1) Check out the List of Bursaries on offer for 2018 on [www.marine.ie](http://www.marine.ie) or get in touch with your Careers Officer.**
- 2) Select the TWO Bursaries that interest you most in order of preference.**
- 3) Complete the Application Form and return it to FAO Annette Jordan, Marine Institute, Furnace, Newport Co. Mayo. Application Deadline is the Friday 9th February 2018 Please attach two signed passport photographs with your application form**

- Students will receive email acknowledgement on receipt of the application form.
- All applications will be reviewed and short-listed using the same method and criteria.
- Successful applicants short-listed for interview will be contacted by email with an interview date, time and location.
- Students will confirm attendance at interview by email.
- Interviews will be held in three possible locations – Marine Institute, Oranmore, Marine Institute, Wilton Park House, Dublin and possibly one other college.
- Interviews will be held mid March 2018.

## **Deadline for receipt of completed application is Friday 9<sup>th</sup> February 2018**

### **1. National Wild Salmon Assessment (3) Supervised by Mary Dillane**

Three (3) students are required for monitoring wild salmon caught by commercial and recreational fishing (draft net and angling), screening for the presence of microtags and collection of biological data and statistics. The students will be based at one of the following locations from June to August: Marine Institute, Newport, Co. Mayo (2); and Loughs Agency, Derry (1).

Marine Institute, Newport (2) based students will recover microtags while sampling commercial and recreational caught salmon at a number of locations along the west coast. They will be involved with biological sampling and data collection, processing the recovered microtags and completing all associated computer work. The students will also be involved with other wild salmon assessment work.

The Loughs Agency in Derry (1) based student will be involved in a number of different projects which the Loughs Agency is currently undertaking, some of which may be: salmon microtag recovery and data collection, stock assessment on salmon and coarse fish, habitat surveying and shellfish sampling and monitoring. A wide range of experience and skills will be gained in varied working environments.

Special requirements – sea survival cert for Limerick based student

### **2. Eel and salmonid biology and surveys (1) Supervised by Russell Poole**

One student is required for this bursary which will involve a number of areas in the Burrishoole eel and salmonid programme; assisting with netting surveys on the lakes in Burrishoole, data collection in the field surveys and fish traps and also with the laboratory sampling of eels and salmon. The bursary will involve a combination of field, laboratory and office duties. Data entry and data preparation for upload into a new database will also be a component of the work. Eels are a common fish coming under increasing conservation pressure to protect the declining stocks. The Irish Eel Management Plans submitted to the EU in Jan 2009 have established various strict management measures. Monitoring the implementation of these measures along with surveys to assess the current status of the stock are components of the eel Management Plans. This bursary will be based at Marine Institute, Newport, Co. Mayo. Much of the work will be outdoors, own transport is desirable and a basic sea safety course essential.

### **3. Catchment environment and fish surveys (1) Supervised by Elvira de Eyto**

One student is required for participation in the freshwater environmental monitoring programme in the Burrishoole river catchment. The work involves collecting data in the field, maintenance of instrumentation, laboratory analysis, processing and collation of data. Sampling sites can be quite isolated and may require long walks or climbs to reach them in all sorts of weather, so an appreciation of the “great outdoors” would be desirable. A component of the programme will be undertaking macro-invertebrate surveys in streams and lakes and post-processing the samples in the laboratory including identification and analysis.

A second component of the work will involve stream and lake population surveys of juvenile salmon, trout and eel using electrofishing and seine netting. The student will use a variety of netting and electrofishing techniques. The work will also involve fish measurement, scale reading and otolith preparation and data processing.

Much of the work will be outdoors and own transport is desirable but not essential. This bursary requires a considerable amount of outdoor activity and the successful student must be physically fit and have an interest in hiking etc. This bursary will give the opportunity to be involved in a wide range of fishery and environment related projects. The bursary will be based in Marine Institute, Newport, Co Mayo.

#### **4. Migratory Fish Stock Assessment (2) Supervised by Ger Rogan**

Two students are required to assist in daily monitoring of the fish trapping installations including counting and sampling salmon, sea trout and eel as part of a team. Fish Trap Census is one of the core research programmes undertaken in MI-Newport and the Salmon Ranching Programme is an integral part of the Census work. The student involved with this bursary will, while working as part of a team, assist with monitoring fish movements, taking measurements, fish scale samples, tagging & releasing salmon & trout and will be involved with sampling returned ranched salmon for tags.

The work will include daily working in the fish traps on the two rivers, some initial data processing, preparation of scale samples for age analysis and will also have links with the core Burrishoole catchment programme. Data entry and data preparation for upload into a new database will also be a component of the work.

Much of the work will be outdoors, own transport desirable and sea safety course recommended but not essential. A flexible working arrangement may be needed for covering weekends and evenings, largely weather dependent. The bursary will be based in the Marine Institute, Newport, Co. Mayo.

#### **5. Fish Rearing/Burrishoole Fishery (1) Supervised by Alan Drumm**

One student is required to assist with all aspects of aquaculture research currently being undertaken in the salmonid rearing unit. Hatchery duties will be based around associated fish husbandry procedures such as fish welfare, feeding, hygiene, mortality checks, fish grading, fish harvesting and data processing. The student will also provide support to the Fishery Manager with the day to day running of Burrishoole Fishery. Fishery duties will include: record keeping / data input (excel spreadsheets), dealing with customers, microtag recovery from ranched salmon returns (coring etc) and working with ghillies to ensure compliance with safety procedures. An interest in angling is desirable. The bursary will be based in the Marine Institute, Newport, Co. Mayo.

#### **6. Aquaculture Field work (2) Supervised by Pauline O'Donohoe**

This bursary will involve the collection of samples from the marine environment and fish farm installations, qualitative and quantitative analysis of these samples, general laboratory tasks and other duties as required. The main focus of the bursary will be field work which will involve working at sea alongside the Aquaculture team in remote locations in Connemara in small inshore boats, some morning and evening work may be required pursuant to weather conditions and tides. Strong computer skills are required for this bursary, especially MS Excel. Sea safety certificate is an essential requirement A full driver's license and a vehicle are very desirable. The student will be based in the MI Oranmore.

**7. Fisheries Samplers (3) Dunmore East Co. Waterford (1) Castletownbere, Co. Cork (1) Oranmore Galway (1) Supervised by Dermot Fee, Tobi Rapp and Ian Murphy**

Three students are required for routine sampling of a variety of fish/shellfish species including Demersal, Pelagic, Nephrops, and Shellfish. The main duties will involve:

- Taking records of length, weight, sex, and where possible maturity from a variety of fish species. Otolith and illicia removal for age reading purposes will also be carried out. There will be opportunities for aging of some species of fish.
- Nephrops sampling involves the sampling the catch and discards from the Celtic Sea Irish Sea and South west of Ireland fishery using digital calipers and the Nemesys Electronic Measuring System.
- The bursar will also help with the input and quality control of data in to the FEAS STOCKMAN database.

One bursar will be based in the laboratory in Dunmore East and the other based in Castletownbere and the third in Oranmore Galway. The Bursars will travel with the local analysts to other sampling sites to assist in biological sampling. The Dunmore East and Castletownbere bursars will be expected to liaise with fishermen, skippers and processors in their respective areas in order to secure samples when required. A car and drivers licence is desirable but not essential for collection of samples around the respective areas.

The Oranmore Bursar being based in the MI headquarters will have more of an emphasis on working up Nephrops samples from the Irish Sea, Aran ground and Porcupine Sea fishery using digital callipers and the Nemesys Electronic Measuring System Sampling trips (Approximately 4) to Ros an Mhíl will occur.

All students will be expected to contribute to the data entry from the Sentinel Vessel programme. This is logbook data coming from a selection of inshore vessels and also data entry and validation of data coming from the Discard programme.

The successful students will have an interest in fisheries science, a willingness to learn, good interpersonal skills, is self-motivated, has basic computing skills and an ability to work unsupervised in the port. An interest in crustacean and fish biology is desirable. A methodical approach to record keeping is essential. Training will be provided in all the sampling techniques required.

**8. Age Preparation Laboratory FEAS (1) Supervised by Marcin Blaszkowski**

The bursar is required for routine work based in Age Preparation Laboratory (FEAS) in MI-Oranmore. The main duties will involve:

- Assisting Laboratory Analyst with the preparation of samples for Age Reading analysis.
- Preparation of mould plans for all otoliths and illicia to be sectioned.
- Marking and mounting of otoliths and illicia.
- Cleaning and washing of otolith moulds, equipment and laboratory after use.
- Following SOPs and adhering to all Health and Safety guidelines and practices.
- Archive otoliths.
- Assisting other laboratory analysts with Demersal/Inshore/Nephrops/Pelagic sampling as appropriate. The work will involve taking records of length, weight, sex, and where possible maturity. Otolith and illicia removal for age reading purposes will also be carried out during the bursary.
- Data entry and data validation.

- Assisting the Survey analyst in the preparation of gear and equipment for various surveys as appropriate.

The successful student will have an experience of working in a laboratory environment and understanding of good laboratory practice and H&S principles in a laboratory. The student should have ability to stay motivated while carrying out repetitive tasks and be meticulous, with a good eye for detail.

A methodical approach to follow Standard Operating Procedures and record keeping is essential. The bursar should demonstrate interest in fisheries science and routine laboratory work, a willingness to learn, good interpersonal skills, be self-motivated, has basic computing skills and an ability to work unsupervised in the laboratory.

An interest in crustacean and fish biology is desirable.

Training will be provided in all laboratory procedures and the sampling techniques required.

The bursar will be based in the Age Preparation Laboratory in MI-Oranmore and will work closely with the Team of FEAS analysts based there.

#### **9. Benthos Ecology reference collection collation (1) Supervised by Louise Healy**

This student will work with the Benthos Ecology Group in the Marine Institute in Rinville, Oranmore, Galway.

The primary functions of the bursary will involve the collation of preserved marine invertebrate specimens from a number of preserved collections held by the MI, their maintenance and the subsequent population of a central reference collection allied with data management.

Specimen maintenance will require confirmation of the identification of the taxa, ensure appropriate preservation and storage and subsequent entry of data into a bespoke database.

Data management will require input with the development of a database and subsequent input of data to the database; as well as coding, cataloguing and cross referencing of specimens.

The successful student will gain experience in marine invertebrate taxonomy and data management.

The student will preferably have a preliminary interest in marine invertebrate taxonomy and ecology and/or data management. In addition, good communication and analytical skills are desirable.

#### **10. Long term temperature climatology (1) Supervised by Guy Westbrook**

One student is required to work with the Oceanography department. Marine and meteorological data records have historically been recorded by hand and stored on paper records. The extension of existing archives back in time can greatly add value to the understanding of our climate, so efforts are being made to digitise older records. Analyses of these records will help to increase our understanding as to how older measurement techniques might be reconciled with more modern systems.

The student will undertake a range of duties including the digitising of archival data, data entry and will have the opportunity to analyse the results using tools such as Microsoft Excel or other applications of their choice. The Bursary will be based in the Marine Institute - Oranmore.

**11. Research Funding Programme Reports (1) -Office of Research & Development (ORD)**  
**Supervised by Ciaran Kelly**

This bursary is aimed at providing experience of a busy research funding office for someone who wants to get an inside view on how funding opportunities for marine research in Ireland are organised and executed. The position is primarily desk based but there may well be numerous tasks off site, particularly around the SeaFest 2018 event which will take place in Galway in June this year.

- The primary duties will be centred around assisting with the Running of funding calls and helping out with the production of publications including print, design and layout and providing administrative support in compiling data for publication detailing research projects funded from 2007-2013.
- Assisting with collating information relating to ongoing and past project outputs.
- Contacting project leads for details on publications, journal articles, conference presentations etc.
- Inputting data related to projects and project outputs on the Marine Institute's online grant management system.
- Any other duties appropriate to the role as required from time to time.

Candidate needs to be comfortable in assisting with publication design and layout, and should be competent in MS office applications. A good phone manner and easy communication style are essential The Bursary will be based in the Marine Institute - Oranmore.

**12. Marine Communications (1) Supervised by Cushla Dromgool-Regan**

The Marine Institute communications office is looking for an outgoing person who is interested in developing their professional communications skills including marketing, public relations, events and outreach. The successful applicant will be studying Communications, Media Studies or Marine/Environmental Science. The successful applicant will assist with day to day PR and communications duties including writing, creating social media content, photography, marketing projects, as well as taking part in events including Ocean Wealth Summit and SEAFEST 2018 (29 June -1 July). The Bursary will be based in the Marine Institute - Oranmore.

The successful candidate must be a

- Excellent interpersonal skills and strong writing skills.
- Have an eye for detail, good organisational skills and be a team player
- An interest in promoting marine science to the public

**13. Archive Bursary (1) Supervised by Niall O'Maoileidigh**

Growth marks, genetic material, and chemical constituents of fish scales and otoliths (ear bones) can be used to reconstruct how fish populations have responded to environmental change over multidecadal timescales. The Marine Institute holds over 10,000 scale and otolith samples (from salmon and trout), with some collections dating back to the 1920's. The Unlocking the Archive (UTA) team are working to consolidate the samples into one biochronology repository. The UTA team are also developing a database that will hold growth data and scale/otolith images. The

Archive Bursary is a desk based placement. The student will work with the Unlocking the Archive team to develop the MI's scale and otolith biochronology repository. The tasks are:

- Record, clean, and curate fish scale samples that date back to the 1920's.
- Image modern scales using an Olympus compound microscope and Image pro plus software (training will be provided).
- Assist other researchers in the field or lab when necessary

The Bursary will be located at the Marine Institute Newport Co Mayo.

#### **14. Cruise Summary Report Data Assistant (1) Supervised by Rosemarie Butler and Will Meaney**

The Marine Institute manages the Irish oceanographic research fleet on behalf of the Department of Agriculture, Food and the Marine (DAFM). On completion of each scientific survey, key information is required to be provided to a centralised European catalogue as a Cruise Summary Report (CSR). This information also underpins the details of data collection activities within the new Marine Institute Data Catalogue. Presently the fleet consists of two vessels; the RV Celtic Explorer (in service since 2003) and RV Celtic Voyager (in service since 1997 when it replaced the RV Lough Beltra, which had been in service since the later 1970s).

An opportunity exists for a highly motivated student to carry out a forensic comparison of the cruise archives and annual reports with the information in the central European databases. Sources of key information should be identified, verified and captured. A process will then be developed to move from the current manual submission of CSRs to an automated system of submission, utilising tools provided by European projects such as SeaDataCloud. The majority of the work will be desk based with the opportunity to spend time on each of the vessels, while in port, to map key information about the vessel's sensors. The Bursary will be based in the Marine Institute - Oranmore.

By the end of the bursary the student will take responsibility for providing:

- quality controlled database of cruises undertaken by the research fleet up until the end of 2017.
- workflow for automated submission of CSRs to appropriate European research cruise catalogues.

During the bursary training in the construction, use and maintenance of databases, will be provided, as will an overview of research survey planning and reporting.

Essential: A high level of IT & computer literacy (Word, Excel, Internet/Email). Problem solving.

Advantageous: Basic knowledge of database principles. Basic programming knowledge. Full and clean drivers license. Interest in marine science

#### **15. Ireland's Ocean Economy – A Spatial analysis of Marine Businesses in Ireland Supervised by Jenny O'Leary**

This Bursary involves desk top research and data analysis of marine businesses in Ireland. The research will include a review of CSO NACE codes used by the Socio-Economic Marine Research Unit in NUIG as part of their Ocean Economy Reporting Series and linking these to a georeferenced business Directory (that will be available in the MI).

The Bursar will be asked to provide a report and maps of the spatial distribution of marine businesses/maritime clusters in Ireland including regional and rural distribution. Experience working with large scientific or economic datasets and knowledge of GIS would be beneficial. The Bursary will be based in the Marine Institute - Oranmore.

#### **16. Human Resources Project Support**

The Human Resources Project Support Bursar will gain exposure in the full H.R. suite of services in a busy H.R. office holding Excellence through People Accreditation.

The bursar will be responsible for carrying out desk research in support of the teams 2018 projects. The primary project that this placement will be focused on is a review of the Marine Institute Recruitment and Selection policy and procedures with a view to benchmarking and developing to current industry best practice.

While this piece of work will form a part of the placement, the successful applicant will also be afforded the opportunity to observe, and support where possible, in the team's day to day provision of services across the areas of Recruitment & Selection, Performance Management, Learning and Development and Employee Wellbeing. The bursar will also be given an insight into Human Resources Management Information Systems and administration procedures which support the provision of our services.

Special skills/essential requirements

- This is an ideal and exciting opportunity for an outgoing individual interested in gaining an insight into the work and day to day operations of a generalist H.R. office and developing their skills accordingly. Pursuing a third level qualification in Human Resources, Business or a related field.
- Ability to research broad topics and summarise key points.
- Strong communication and interpersonal skills.
- Excellent attention to detail.
- The ability to work on own initiative and as part of a team.
- The ability to work in a confidential environment.
- High levels of computer literacy (MS Office, Email/ Internet).

The Bursary will be based in the Marine Institute - Oranmore.