



# THE FERNS FIELD SCHOOL: DISCOVERING AIDAN'S MONASTERY INTENSIVE BIOARCHAEOLOGY PROGRAM COUNTY WEXFORD, IRELAND

Course ID: 365AZ

June 13–July 10, 2021

Academic Credits: 8 Semester Credit Units (Equivalent to 12 Quarter Units)

School of Record: Connecticut College

## DIRECTORS:

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## INTRODUCTION

The Ferns Field School provides a unique, hands-on opportunity for students to excavate the buried remains of both St Aidan's c. 7<sup>th</sup> century monastery and a 12<sup>th</sup> century Augustinian Abbey in the town of Ferns, County Wexford, Ireland. This site is a multi-period complex, originally founded by St Aidan at the turn of the 7<sup>th</sup> century, which also contains Early Medieval crosses and cross slabs, the twelfth century Augustinian Abbey (Mary's Abbey), and thirteenth century medieval cathedral (Edan's Cathedral) within its wider confines.

While this is the first season of excavations, it is anticipated that human remains from both the Early Medieval monastery and later 12<sup>th</sup> century abbey will be exposed during excavations. The burial practices at the site are presumed to speak to the customs and histories of their times, from an Early Medieval cemetery, through its High Medieval usage, and latterly the change in the official state religion and into a time of proscription. During this latter period the Abbey was suppressed in 1538, but was still described as a church and belfry, dormitory, chapterhouse, hall, and other buildings with c. 600 acres and other interests. Long after this time, and up to the present day, the wider site continued as a place of worship and burial focused on St Edan's Cathedral (which was remodelled in the 19<sup>th</sup> century as a *Church of Ireland* structure).

This project focuses on the remains of the monastery and abbey and has three primary components: excavation of the abbey buildings, excavation of the early monastery, and bioarchaeology. Excavation of the abbey buildings aims to determine their scope and layout as well as the associated infrastructure. A clearer understanding of how the physical structure of the Abbey changed over time will help illuminate:

- the relationship between the friary and its founder, Diarmuid McMurrough (King of Leinster), and its relationship with the town and community; and
- the form of the Abbey through time, specifically the scale and number of buildings, which is one of a small number of High Medieval native Irish monastic orders, that pre-date the coming of the Anglo-Normans

The goals of the excavation of the Early Medieval Monastery are:

- understand the date, form and scale of the c. 7<sup>th</sup> century monastery's enclosure; and
- understand the form of early monastery through time, specifically the scale and number of structures, field divisions, industrial areas, *etcetera*.

The goals of the bioarchaeological research are:

- to describe the nature of mortuary practice throughout the life use of the site as a burial ground for Early Medieval to much later times; and
- to determine the date range and characteristics of the burials, including the biological profile of the interred individuals

By ascertaining who was buried at St Aidan's Monastery and Marys Abbey, where they were buried and when, the bioarchaeological research will inform our understanding of the long-term relationship between the local townspeople and the abbey.

#### ACADEMIC CREDIT UNITS & TRANSCRIPTS

**Credit Units:** Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units) through our academic partner, Connecticut College. Connecticut College is a private, highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see grading assessment and matrix). This field school provides a minimum of 160 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and registrars at their home institution prior to attending this field school.

**Transcripts:** An official copy of transcripts will be mailed to the permanent address listed by students on their online application. One more transcript may be sent to the student home institution at no cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse: <http://bit.ly/2hvurkl>.

#### PREREQUISITES

There are no academic prerequisites. This program is hands-on, experiential learning and students will learn how to conduct archaeological research in a live field environment. What is required is enthusiasm, an open mind and a readiness to 'give it a go'.

#### DISCLAIMER – PLEASE READ CAREFULLY

Our primary concern is with education. Traveling and conducting field research involve risk. Students interested in participating in IFR programs must weigh whether the potential risk is worth the value of education provided. While risk is inherent in everything we do, we do not take risk lightly. The IFR engages in intensive review of each field school location and programming prior to approval. Once a program is accepted, the IFR reviews each program annually to make sure it still complies with all our standards and policies, including those pertaining to student safety.

The IFR does not provide trip or travel cancellation insurance. We encourage students to explore such insurance on their own as it may be purchased at affordable prices. [insuremytrip.com](http://insuremytrip.com) or [Travelguard.com](http://travelguard.com) are possible sites where field school participants may explore travel cancellation

insurance quotes and policies. If you do purchase such insurance, make sure the policy covers the cost of both airfare and tuition. See this [Wall Street Journal article about travel insurance](#) that may help you decide whether to purchase such insurance.

We do our best to follow schedule and activities as outlined in this syllabus. Yet local permitting agencies, political, environmental, personal or weather conditions may force changes. This syllabus, therefore, is only a general commitment. Students should allow flexibility and adaptability as research work is frequently subject to change.

You should be aware that conditions in the field are different than those you experience in your home, dorms or college town. Archaeological fieldwork in Ireland is carried out in all weather conditions – including rain. You are required to provide suitable waterproof and weatherproof clothing and footwear as well as wind protection. However, in bad weather you will also be provided with shelter. Archaeological investigation will include moderately strenuous physical work. Students must be in good physical condition and able to walk three miles a day comfortably.

If you have medical concerns, please discuss them with your doctor. All other concerns may be discussed with the project director – as appropriate.

## COURSE OBJECTIVES

The program will introduce students to a range of techniques used by modern archaeologists both in excavation and survey. Students will learn the typical progression of archaeological research through non-invasive survey, archaeological excavation and laboratory protocols (focusing on artefact curation and remedial conservation). Student research will be complimented by tours to a number of heritage sites, as well as a series of archaeological lectures/workshops:

- Understand different strands of archaeological enquiry and their application in an archaeological research context
  - Critically interrogate historical records and archaeological survey data, as part of an overall research design
  - Have an understanding of the skills required for the conduct of an archaeological excavation
  - Understand on-site laboratory protocols, and how these contribute to artefact research, conservation and interpretation
  - Have an understanding of the medieval history of both Ireland and Wexford
  - Have the skills to confidently and professionally excavate human remains and to identify and name the bones of the human skeleton (and distinguish it from animal bones)
  - Have an awareness of ethical protocols and considerations when handling human skeletal material
  - Understand skeletal analysis techniques and how to use these to determine sex, age-at-death, and living stature from complete/partial skeletons; as well as understanding the basics of palaeopathology and skeletal trauma identification
- Understand how heritage can be explained and presented in an engaging manner to visitors and the community alike

## GRADING

**Quiz (5%):** A quiz will be held at the end of Week 2 to assess student understanding of archaeological techniques and their application in Irish archaeological research.

**Field school Participation (50%):** Students are required to participate in all field school activities, including research, archaeological survey, excavation and laboratory work. Assessment will be undertaken by the supervisory team and will be based on attendance, willingness to work and to try diverse tasks, attention to detail and accuracy, participation in teamwork and contribution to discussions.

**Field Journal (30%):** Students are expected to complete a field school journal and present it for evaluation during their final week on site. Project staff will instruct students on the expectations for workbook entries and will provide a mid-program assessment on journals, to allow students time to rectify any shortcomings.

**Research Paper (15%):** Students are expected to submit an individual research paper (1,500 words of text plus appropriate in-text citations, illustrations, and bibliography). The paper is due two weeks after the end of the field program though students may submit earlier if they so wish. This paper should be submitted via email as a MS WORD document to both Dr Linda Lynch ([lindalynch1@eircom.net](mailto:lindalynch1@eircom.net)) and Dr Denis Shine ([denis.shine@iafs.ie](mailto:denis.shine@iafs.ie)). For their research paper students will be assessed on their ability to organise and critically evaluate historical and field data, and the strength of their subsequent argument.

### **TRAVEL, ROOM & BOARD, & SAFETY LOGISTICS**

An IFR field school is designed to provide positive, constructive experiences for communities, students, and researchers. Amid the COVID-19 pandemic, the following protocols have been developed based on the assumption that any participant in an IFR field school may be an asymptomatic carrier of SARS COVID-19. Our goal, with these protocols, is to reduce the possibility for COVID-19 transmission among participants, staff, and local community members. IFR depends on the complete and sustained commitment of all students to stay healthy and to help others stay healthy. On enrollment, students commit to comply with all aspects of the IFR COVID-19 avoidance policy as well as any/all policies specific to their respective IFR field school.

### **PRIOR TO TRAVEL**

Students must arrange a test for current infection for COVID-19 through a RT-PCR test for themselves in their home location within 72 hours prior to arrival at the destination and upload proof of negative result to their IFR application portal.

After demonstrating they tested negative, students must take all precautions possible to ensure they remain COVID-19 free prior to and during travel to the field school. Students should plan to travel in the safest manner that they are able (e.g., avoid flights with long layovers and multiple connections). In addition, we require the following from all students: use of a face mask during travel to, from, and on airlines, ferries, trains, busses, and the like; regular washing of hands; and, in so far as possible, maintain social distancing of 6 feet / 2 meters in airports and other spaces.

### **VISA REQUIREMENTS**

Citizens of the US and Canada do not require visas to enter Ireland. You will need your passport to be valid for at least 90 days and will enter on a tourist visa. Citizens of other countries are asked to check the embassy website page at their home country for specific visa requirements

No vaccinations are required for entry to Ireland but anyone working in archaeology in Ireland needs to have an up-to-date tetanus shot.

### **TRAVEL (TO AND DURING THE PROGRAM)**

We suggest you hold off purchasing your airline ticket until six (6) weeks prior to the departure date. Natural disasters, political changes, weather conditions and various other factors may force the cancellation of a field school. The IFR monitors local conditions 6-7 weeks prior to the beginning of each program and makes a decision accordingly. This approach allows sufficient time to still purchase deeply discounted airline tickets.

Students will be met at Edan's Cathedral, Ferns, Co. Wexford. Since students will arrive on different flights at different times of the day, we will meet all students on Sunday, June 14<sup>th</sup>, at the Cathedral at 4pm. Full details on reaching Ferns will be provided in the online orientation once you are enrolled in the course.

If you missed your connection or your flight is delayed, please call, text or email the field school director immediately. A local emergency mobile phone number will be provided to all enrolled students.

### **LOCAL PROTOCOLS, REGULATIONS, & EXPECTATIONS**

In Ireland we follow the government guidelines and restrictions, which are published on the Health Service Executive (our equivalent of the CDC), which has a designated webpage for Covid19 restrictions, information and advice (see <https://www2.hse.ie/coronavirus/>).

The Irish government recently issued a 5-phase plan for the control of Covid19 in Ireland. At 25<sup>th</sup> November 2020, the Republic of Ireland was on a Level 5 status.

Ireland currently operates a 'Green' List of countries from which people can travel to Ireland without quarantining. At time of writing, this is under review, and is being aligned with EU policy.

People arriving from outside of Green list countries are currently required to self-isolate for a period of 14 days on arrival in Ireland. It is likely that this restriction will remain in place until a reliable, rapid testing system is in place at point of entry.

Wexford is a relatively small, friendly and safe Irish town, [some 140km] south of Dublin. All the relevant local government agencies are aware of the students' presence, and they and all the people of the town are anxious to ensure that your stay is safe and enjoyable. Students are asked to respect local sensitivities and traditions and to understand that the presence of such a large team of outsiders in town does not entitle participants to any special treatment or privileges.

Although everyone will speak English students should expect surprising cultural differences and exciting opportunities to learn about the lives of others as well. IFR students will be immersed in Irish culture through learning, language, food and music, and should be prepared for the rewards and challenges that life in a different culture will offer.

*Please note: As the project is a public archaeology initiative students must also be prepared to engage with the local community in a professional and respectful manner both in an official capacity on site and unofficially when off duty.*

#### **FACE MASKS / FACE COVERINGS**

All students, faculty and staff are expected to wear face coverings. Face masks, along with social distancing, are among the most effective ways of minimizing the spread of the coronavirus.

The objective of wearing a mask is to capture potentially infectious droplets from the wearer. Therefore:

- Masks or respirators that are equipped with an "exhalation valve" are not permitted, unless covered by another mask.
- Neck fleeces (gaiter masks) are considered the least effective form of face masks, and are not permitted. (The material found in gaiters tend to break down larger droplets into smaller particles that are more easily carried away in the air.)
- Folded bandanas and knitted masks are ineffective and are not permitted.
- Masks must be worn so as to cover both the mouth and nose. If your mask becomes loose, it can be tightened by twisting the ear loops.

#### **ACCOMMODATION**

Students will stay with local families in Co. Wexford. Home Stay students live with local families, and experience true home life in provincial Ireland. Students will be brought to the site daily. Students should understand that the host families are in rural settings, requiring taxis to reach the town of Wexford. Breakfast and dinner will be provided along with a packed lunch. Students are encouraged to avail of their free time at weekends and explore Ireland.

Homestay accommodation is an integral and critical part of our Covid-19 planning as typically, our students stay with local families.

It is possible but unlikely that the programs will go ahead but that we will use alternate accommodation (e.g. hostels / holiday cottages), but it is hoped that the students will continue to avail of homestay accommodation, as it is an important component of the cultural immersion our programs provide.

Students and staff will be able to isolate within their homestay accommodation, in line with our government health advice. For example, a suspected (or confirmed) case must isolate in their own room and have access to their own bathroom.

All participants in a field school, students and staff, will wear masks while indoors (i.e. during lectures, during labs, in shared residential spaces, etc.).

Regular hand washing will be a part of the project's daily schedule.

### MANAGING COVID-19 CASES & OUTBREAKS

Students and staff will be required to download the health services COVID-19 tracker app, which identifies close contact. The Irish health service operate a contact tracing protocol that has proven very effective.

The Irish health service has a defined protocol for isolation including a mechanism for receiving social welfare payments.

As students are housed with homestay families, we will follow the same protocol as per existing illnesses, and act accordingly.

Students who test positive for COVID-19 or present symptoms of COVID-19 will be required to self-isolate for 14 days and we can accommodate them in their program accommodation if required – however, this will be at an additional cost.

The closest ICU facilities are in Wexford town, Co. Wexford. These are less than 30 minutes away from program bases.

A risk assessment will be undertaken six weeks from the start of the program based on current Irish government health service advice.

### EXCAVATION/TOOL KIT

Students are required to bring a basic tool kit. This includes but is not limited to:

- A four inch pointed **archaeology trowel** (also known as a four inch pointing trowel): We recommend a Marshalltown type trowel (<https://marshalltown.com/4-stiff-london-style-pointing-trowel-wood-handle>).
- Work **gloves**: gardening glove suitable for work in wet weather (textile glove with a rubberised palm).
- Work shoes or boots: **closed toe-footwear, waterproof** that will be comfortable for both walking and kneeling: a hiking style shoe or boot would be suitable. Gumboots/wellingtons are also suitable for use on site however if you choose to wear these for digging, you may need pair of trail shoes or similar for field trips etc.
- **Waterproof outdoorwear**: a jacket (with a hood if possible) and pants – gore-tex is best (but expensive). You will need something sturdy that will stand up to wear and tear of everyday use in excavation. You can buy waterproof gear locally in Ireland (if you choose to do this, budget to spend about €50/\$70).
- **Warm layers** – wool, fleece, thermal layers – you should bring and wear lots of layers rather than one warm/heavy layer. Bring things that are suitable for outdoor work.
- **Sunscreen**: students should wear an SPF daily to protect against UV exposure and windburn.
- **Hat**: something to keep your head warm. A peaked hat can be useful for shade while digging.
- **COVID19 Prevention**: All participants in a field school, students and staff, will wear masks while indoors (i.e. during lectures, during labs, in shared residential spaces, etc.).
- **Laptop/tablet**: a device on which you can prepare and submit your presentation and written assignments. A smart phone is not suitable for this.

### FIELD PROGRAM

The field program, while focused on excavation and bioarchaeology, includes instruction in archaeological survey and post-excavation techniques. The program is primarily based in Ferns, although students will also be brought to several regional heritage sites. Site and project orientations will be conducted at the start of week one.

**Week 1 - Orientation and Fieldtrips**: Following project orientation and induction students will be introduced to the wider research area and period through a series of lectures and visits to regional heritage sites, such as Carrick, Bannow Bay and the Hook Lighthouse. These fieldtrips will help demonstrate the different

physical, archaeological and cultural landscapes surrounding the site. The field trips are designed to help place Ferns within its broader historical and geographic context.

### Weeks 2, 3 and 4

**Excavation (located on site, under cover as appropriate):** Students will be instructed in archaeological excavation and recording techniques – including excavation of archaeological features, documentation of finds, completion of site drawings and record taking of archaeological deposits. Excavations will be covered (as appropriate) to permit excavation in colder/wetter weather conditions. Potential areas of excavation include structural remains of the abbey, the monastic boundary, occasional burials (or disarticulated human bone: DHB) around the abbey, and other medieval features within the monastic complex. What each student excavates will depend entirely on the overall pace and research goals of the excavation at that time. There is no guarantee that human skeletal remains will be exposed during the excavation; while there is a high likelihood of remains being generated, this cannot be guaranteed.

**Laboratory Protocols:** A focus will be placed on the cataloguing and remedial conservation of both artefacts and ecofacts, according to standards set by the *National Museum of Ireland* (NMI). The NMI requires that all finds recovered in archaeological excavations are prepared, and conserved where necessary, according to strict protocols, in advance of submission to the museum. Students are expected to understand these processes and will get the opportunity to work with several different archaeological material types (pottery, glass, metal, bone etc).

**Bioarchaeology:** A focus will be placed on understanding Irish mortuary practice, specifically looking at the near continuous 1500 years of burial at St Aidan’s Monastery itself. Where burials are exposed students will gain practical burial excavation experience; where burials are not exposed these skills will still be taught in a controlled staged environment. Students will also have the opportunity to analyse archaeological skeletal remains during laboratory sessions, which will cover: human and comparative osteology; determination of sex and age-at-death; living stature; identification of palaeopathological conditions, *etcetera*.

*\* The rotation of students through tasks including excavation, survey, bioarchaeology and post-excavation is dependent on weather conditions and student numbers; students may be split into smaller groups and rotated through different tasks simultaneously, while changes in the schedule are likely to be made to accommodate poor weather.*

### SCHEDULE

All IFR field school begins with safety orientation. This orientation includes proper behavior at the field area, proper clothing, local cultural sensitivities and sensibilities, potential fauna and flora hazards, review IFR harassment and discrimination policies and review of the student Code of Conduct.

In addition to working on site, students will be introduced to archaeological field methods, Irish archaeology, and bioarchaeology through a series of lectures/workshops (as outlined below). Students will also be given dedicated research during their time on site, to prepare their assignments and access local readings.

The normal working day is from 9:00am to 5.00pm with a morning tea break from 11:00-11:30am and lunch from 1:30-2:15pm. Students will have weekends free to explore the area and other parts of the country.

### INDICATIVE SCHEDULE IN ADDITION TO SITE WORK\*

Week	Day/Date	Time	Event
1	Sunday 13 <sup>th</sup> (June)	Afternoon	Students arrival and welcome meeting
	Monday 14 <sup>th</sup>	Morning	Lecture/Project Orientation
		Afternoon	Field trip 1: Tour of Ferns and Ferns Castle
	Tuesday 15 <sup>th</sup>	Morning	Lecture/Workshop: Archaeology of Medieval Ferns/Wexford
		Afternoon	Field trip 2: Tour of INHP and Carrick - A High Medieval Landscape
Wednesday 16 <sup>th</sup>	Morning	Lecture/Workshop: Ferns Project and Heritage Outreach	

		Afternoon	Field trip 3: The Hook Lighthouse, Bannow Bay, etc.
	Thursday 17 <sup>th</sup>	Morning	Lecture/Workshop: Bioarchaeology Workshop 1
		Afternoon	Lab Session: Assessing Skeletal Remains
	Friday 18 <sup>th</sup>	Morning	Lecture/Workshop: Bioarchaeology Workshop 2
		Afternoon	Lab Session: Assessing Skeletal Remains
	Saturday 19 <sup>th</sup>	All day	Free Day
	Sunday 20 <sup>th</sup>	All day	Free Day
2	Monday 21 <sup>st</sup>	All day	Introduction to excavation/staged burial excavation
	Tuesday 22 <sup>nd</sup>	All day	Introduction to excavation/staged burial excavation
	Wednesday 23 <sup>rd</sup>	Morning	Excavation orientation
		Afternoon	On site (excavation [and post-excavation])
	Thursday 24 <sup>th</sup>	All day	On site (excavation [and post-excavation])
	Friday 25 <sup>th</sup>	Morning	Quiz and mid program journal assessment
		Afternoon	Independent research time (timing is weather dependent)
	Saturday 26 <sup>th</sup>	All day	Free Day
	Sunday 27 <sup>th</sup>	All day	Free Day
3	Monday 28 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
	Tuesday 29 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
	Wednesday 30 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
	Thursday 1 <sup>st</sup> (July)	All day	On site (excavation, bioarchaeology and post-excavation)
	Friday 2 <sup>nd</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
			Independent research time (timing is weather dependent)
	Saturday 3 <sup>rd</sup>	All day	Free Day
	Sunday 4 <sup>th</sup>	All day	Free Day

4	Monday 5 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
	Tuesday 6 <sup>th</sup>	Morning	On site (excavation, bioarchaeology and post-excavation)
		Afternoon	<ul style="list-style-type: none"> <li>• Meetings to discuss student research</li> <li>• Turn in field journals</li> </ul>
	Wednesday 7 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
	Thursday 8 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
		Evening	End of program cultural event
	Friday 9 <sup>th</sup>	All day	On site (excavation, bioarchaeology and post-excavation)
		Evening	Prepare for Saturday departure
	Saturday 10 <sup>th</sup>		Depart

*\*Please note: changes to this schedule will occur due to factors beyond our control such as weather, etc.*

## MANDATORY READING

*PDF files of all mandatory readings will be provided to enrolled students via a shared Dropbox folder.*

Corlett, C. 2012. Ferns, Co. Wexford. Heritage Guide No. 59. Archaeology Ireland: Dublin.

Dowling, G. 2015. Geophysical Investigations at Ferns, Co. Wexford. Unpublished Technical Report for the Discovery Programme.

Doyle, I. 2016. Telling the Dancer from the Dance: The Archaeology of Early Medieval Wexford. In I. Doyle and B. Browne (eds). Medieval Wexford: Essays in Memory of Billy Colfer. pp 35-61. Four Courts Press: Dublin.

Institute of Archaeologists of Ireland. 2004. The Treatment of Human Remains. Technical Paper for Archaeologists. IAI: Dublin.

- Institute of Archaeologists of Ireland. 2006. IAI Code of Conduct for the Archaeological Treatment of Human Remains in the Context of an Archaeological Excavation. IAI: Dublin. Available online: [http://www.concernedhistorians.org/content\\_files/file/et/98.pdf](http://www.concernedhistorians.org/content_files/file/et/98.pdf)
- National Museum of Ireland: Policy on Human Remains. 2006. Available online: <http://www.museum.ie/NationalMuseumIreland/media/Corporate-Information/Policies%20and%20Guidelines/Policy-Human-Remains-Final.pdf>
- O'Keefe, T. 1997. Diarmait Mac Murchada and Romanesque Leinster: Four Twelfth-Century Churches in Context. *The Journal of the Royal Society of Antiquaries of Ireland* 127, 52–79.
- O'Keefe, T. and C. Bates. 2016. The Abbey and Cathedral of Ferns, 1111-1253. In I. Doyle and B. Browne (eds). *Medieval Wexford: Essays in Memory of Billy Colfer*. pp 73-96. Four Courts Press: Dublin.
- Shine, D. and Mandal, S. 2017. Ferns Archaeological Site Handbook. Unpublished site handbook, which will be circulated to students after enrolment on the course. (Typically 50 pages in length).

## RECOMMENDED READING/REFERENCE GUIDES

- Buikstra, J. E., & Ubelaker, D. H. 1994. *Standards for Data Collection from Human Skeletal Remains*. Fayetteville, Arkansas: Arkansas Archaeological Survey.
- Byers, S. N. 2010. *Introduction to forensic anthropology*. Pearson Education, Boston.
- Colfer, B. 2002. *Arrogant Trespass : Anglo-Norman Wexford 1169-1400*. Duffry Press, Wexford, Chapters 1-4.
- Cox, M., & Mays, S. 2006. *Human osteology in archaeology and forensic science*. Cambridge University Press, Cambridge; New York.
- Duffy, S. 1997. *Ireland in the Middle Ages*. Gill and Macmillan, Dublin.
- Hillson, S. 1996. *Dental Anthropology*. Cambridge University Press, Cambridge.
- Ortner, D. J. 2003. *Identification of pathological conditions in human skeletal remains* (2nd ed). San Academic Press , Diego, CA.
- Roberts, C. A., & Manchester, K. 2007. *The archaeology of disease*. Cornell University Press, Ithaca, N.Y
- White, T. D., & Folkens, P. A. 2005. *The human bone manual*. Elsevier Academic, Amsterdam; Boston.

## ADDITIONAL READINGS

- Barry, T. B. 1987. *The Archaeology of Medieval Ireland*. Routledge, London. Chapters 1-3.
- Bradley, J., Ó Drisceoil, C. and Potterton, P. (eds). 2016. *William Marshal and Ireland*. Four Courts Press, Dublin.
- Colfer, B. 2013. *Wexford Castles: Landscape, Context and Settlement*. Cork University Press, Cork.
- Doyle, I. and Browne, B (eds.) 2017. *Medieval Wexford: Essays in memory of Billy Colfer*. Four Courts Press, Dublin.
- Green, K. and Moore, T. 2010. *Archaeology, an Introduction*, 5<sup>th</sup> Ed. Routledge, Oxford. Chapter 3, Sections 3.3-3.5.
- Kavanagh, J. 2004. Ferns Upper, Ferns. Multi-period. in I. Bennett, *Excavations 2004. Summary Accounts of Archaeological Excavations in Ireland*, pp 466–7. Dublin: Wordwell.
- Sweetman, D. 2000. *The Medieval Castles of Ireland*. Boydell Press, Suffolk.
- Ryan, F. 2000. *Archaeological Findings from Monitoring of Phase 1 of Ferns Sewerage Scheme, Co. Wexford*, Unpublished Technical Report (98E0132) by Mary Henry Archaeological Services. Wexford.
- Ryan, F. 2012. Excavation of a Late Iron Age Ring-Ditch at Ferns Lower, Co. Wexford. In C. Corlett and M. Potterton (eds.) *Life and Death in Iron Age Ireland in the Light of Recent Archaeological Excavations*. pp 273-90. Dublin.
- Sheehan, C. 2006. Ferns Upper, Ferns. In I. Bennett, *Excavations 2003. Summary Accounts of Archaeological Excavations in Ireland*, 532. Wordwell: Bray.