

ERRATA

The following is a list of typos and mistakes that I made in the online lectures. These mistakes have already been corrected in the slides (and the lecture notes, if relevant).

- p5 (of the slides) middle r -times should be n -times
- p45 line 4 "be an exact complex" should be "be a complex" and "is iff" should be "is exact iff"
- p36 $\phi(R)$ should be $\phi(S)$
- p37 $(r/1)(m/1) = rm/1$ should be $(r/1)m = rm$
- I mistakenly uploaded a version of the lecture notes containing unfinished chapters as well as flags in the margins (which are useful while editing the text). This is now corrected (22/01/2021).
- I have now modified the slides so that the Theorems, Lemmata etc are numbered. I initially hoped that I could do without the numbering but this proved impossible.
- p49 A/I replaced by R/I
- p69 reference to the next theorem (the Hilbert basis theorem) added
- p76 $S \subseteq A$ replaced by $S \subseteq B$
- p90 $\lambda_B : B \rightarrow B_{\mathbf{q}}$ replace by $\lambda_B : B \rightarrow B_{\mathbf{p}}$
- Q1 of sheet 2 (old version), before 'where K is a field', add 'in $K[x, y, z]$ '; this is now corrected on the website
- p155 l-2 replace $\lambda(\mathbf{q}^n)$ by $\overline{\lambda(\mathbf{q}^n)}$
- p104 l-1 (and p28 l-9 of the notes) replace by "finite as a $K[y_1, \dots, y_t]$ -module"
- in Q6 of sheet 3, I should be $\mathbf{m}$ (this is now corrected)
- in Q7 of sheet 3, K is the fraction field of R (this is now corrected)
- p206 l-1,-2,-3 replace $\mathbf{p}$ by $\mathbf{q}$
- p160: *stricto sensu*, the argument described in the lecture only works when the the height of $\mathbf{p}$ is finite; a complement is needed to deal with the case where the height of $\mathbf{p}$ is infinite (which is shown to be impossible in the end); see the proof of Corollary 1.15 in the notes.
- Sheet 4 Q1 assumption $r \neq 0$ missing (now corrected)
- p184, l2 replace $\dim(R)$ by $\dim(R[x])$; also Aidan Gallagher pointed out to me that the proof of Th. 0.45 can be simplified; the simplified proof is now in the notes (but I left the longer proof in the slides in order not to disrupt the layout of the slides).